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THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE ADRENAL GLANDS*

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The number of clinical syndromes which are definitely attributable to disease of the adrenal glands, in the present state of our knowledge, is not very great. The results of recent physiological and biochemical studies, however, are beginning to offer a solution of many problems. As is well known, present knowledge indicates that the two parts of the adrenal—cortex and medulla—are in reality separate anatomical and functional structures. Ever since the discovery and appreciation of this fact, however, the suspicion has remained that the close proximity of these two apparently distinct structures must indicate in some way an interdependence of function. Although both organs have a separate arterial supply, the blood from the cortex flows eventually into the capillary network of the medulla, and most of the blood ultimately is drained from the whole gland by the one venous system of the medulla. The possible significance of this anatomical arrangement is not yet clear.

It is now definitely established that the medulla is the site of formation of adrenalin, and that a clinical syndrome of hyperfunction of the adrenal medulla exists, due to flooding of the body with adrenalin. It is found in medullary tumors. Clinical hyperplasias of the medulla have not been observed. These adrenalin-producing tumors have been called chromaffin-cell tumors, and several other names have also been suggested. They are generally slow growing, encapsulated growths. Often it is possible to remove them successfully, with complete amelioration of the symptoms, and apparent

cure of the patients. Since this is true, the importance of recognizing the clinical signs of this condition, rare though it may be, is obvious. These growths are sharply distinct from adrenal cortical tumors, and a word of description may be in order. The presence of the tumors is characterized by attacks of paroxysmal hypertension, in which other evidence of sympathetic excitation are also exhibited. At irregular intervals, due to mental or emotional stimulation, physical exertion, abdominal pressure, or even stretching or bending into certain postures, the blood pressure will rise sharply, 100 to 150 points above its usual level. The duration of the occurrence of such periodic attacks varies between a few months and a number of years. The frequency of the attacks, as a rule, increases with the duration of the disorder. Intervals of years may elapse but usually they are found to come at the beginning once or twice weekly, and gradually to increase in frequency until they occur daily or several times daily. An

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attack lasting sixteen hours has been reported. In one case recently observed, death occurred, presumably from an attack induced by pressure, subsequent to drinking four glasses of water for a renal function test. The most frequent times of the attacks seem to be in the early morning hours, or upon arising, or in relation to meals. Prior to the onset of this disease, the general health is, as a rule, good. Extreme fatigue and prostration follow the attacks, and no effect on the alarming symptoms has been accomplished by a wide variety of drugs.

The attacks are accompanied by palpitation, vertigo, flushing, difficulty in breathing, profuse sweating, pulsations of the neck vessels, and tremors of the extremities and head. Vomiting is common, usually with nausea. Pulmonary edema frequently occurs. Severe pain usually is present, which may be precordial or epigastric. Usually the hypertension and the accompanying symptoms subside gradually, often over a period of several hours. In two-thirds of the cases which we have studied neither the tumor nor the proximal kidney was felt. In the others a palpable mass was made out, which has been mistaken for the spleen when present on the left side. X-ray and pyelogram studies have been disappointing in that they have never disclosed the presence of a medullary tumor which was not also demonstrable by palpation.

A great proportion of the cases with tumors of the medulla have been bilateral, and the others have been about equally divided as to the side affected. The possibility of inducing attacks of hypertension during operations complicates the picture. In case a normal adrenal is found at the first incision, the shock or pressure may precipitate a release of adrenalin from the other, affected side, and cause a severe attack. The fatal cases usually have pulmonary edema and cardiac enlargement, which are frequently found at autopsy. The tumors are usually described as beefy red and soft, the consistency being compared to that of the enlarged thyroid of Graves' disease. They vary from the size of a cherry or English walnut to that of an orange, kidney or grapefruit. The size seems to bear little relation to the number or intensity of the attacks. Large amounts of adrenalin have been recovered from these tumors and in one case of ours more than seven times the

normal concentration of adrenalin was found in the tumor tissue. It is to be remembered that the clinical history may sometimes be mistaken for neurotic or climacteric disturbances. A proper and early diagnosis is of great importance because of the possibility of surgical removal and cure.

At the present time there is no clinical syndrome which, in our opinion, with existing methods can definitely be associated during life with reduced function of the adrenalin medulla. We will, therefore, pass to a consideration of the conditions of over-function and of under-function of the adrenal cortex. Modern interest in this matter has been greatly heightened because of the discovery of an extract from the adrenal cortex which is effective in maintaining the lives of adrenalectomized animals. A very brief consideration of the function of the cortex is necessary in order to have a proper understanding of the clinical disorders.

The adrenal cortex is now believed to have an intimate relation to sexual development, to carbohydrate metabolism, to protein metabolism, and to the metabolism of mineral salts, sodium and potassium, and water. Very recently evidence has been advanced of its relationship to one of the vitamin B factors, riboflavin.

Studies during the past two years, particularly by Reichstein at Zurich, and by Kendall, and Wintersteiner and Pfiffner in this country, have shown rather clearly that the cortical hormone is a cholesterol-like substance belonging to the group of chemical compounds known as phenanthrenes, of which the sex hormones are also members. It will be recalled that the adrenal cortex is said to resemble the histological appearance of the corpus luteum, and the close chemical relationship of the cortical hormone to the sex hormones offers a suggestive explanation for the frequent occurrences of sexual abnormalities in patients suffering from cortical tumors, in which the metabolism or chemical formation of the cortical hormone may presumably be abnormal. The relationships of the adrenal cortex to carbohydrate and protein metabolism, on the other hand, at the present time are very poorly understood. Attacks of hypoglycemia do sometimes occur and may sometimes be responsible for death in the crises of Addison's disease. Similarly, the muscular weakness may be due to disturbed

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carbohydrate metabolism. No less than five separate, although closely related compounds, have now been described by Reichstein, with varying degrees of cortical hormone activity. It is possible, however, that they may each have some special relation to one of these functions.

The effects of excessive or distorted activity seems to be fairly clear in the case of cortical adrenal tumors with their extraordinary symptomatology in the realm of sexual development. As a matter of fact, not only sexual development is perverted but these tumors often have a profound effect upon the general physical development, the structure of the bones, muscles, skin, and upon the mental processes. The general outlines of this syndrome have been better understood recently. The clinical picture has been termed "the adrenocortical syndrome," and while not always typical, has a number of characteristic features.

Cortical tumors are usually soft growths of yellowish color. They are at first well encapsulated but may later grow through and invade other tissues, with localized hemorrhages and areas of necrosis. If metastases occur, they are frequently to the liver and lungs. When the tumors appear in infancy and childhood, they may produce symptoms of precocious puberty, with abnormal hair development, voice changes, mental and physical changes, and obesity and hypertrophy of the sex glands. A child of 18 months recently seen by the writer had the external genitalia of a man with hairy development and obvious precocious mental changes. This case died at operation, at which time a cortical tumor was discovered. A patient reported by Fordyce is said to have carried a bucket of coal weighing 18 pounds across the room shortly after learning to walk, at the age of 20 months. In girls, before the age of puberty, cortical tumors are associated with many of the characters of the precociously adolescent male. Hirsutism and hypertrophy of the clitoris are marked features. It should, however, be borne in mind that this syndrome has also been observed in disorders of the gonads, thymus, and probably of the pineal and pituitary. The adrenal, however, is probably also involved in these cases.

Tumors in the adult lead to virilism and hirsutism, and many cases occur in women who have previously been quite normal.

They are associated with gradual inversion of the sexual characters, both psychic and physical, a change which is sometimes distressingly evident to the patient herself. Hair appears in the body regions where it normally occurs in the male. It is apt to be short, crisp and curly, and may be profuse over the face and thighs. It is also common on the legs and forearms. There is a loss of the feminine psychic reactions, and untidiness and coarseness of voice may occur. There is a loss of normal sex interest. Amenorrhea is the rule. We lay great stress on this fact. In our series, obesity is not a characteristic. In the adolescent the menses fail to appear. In older persons, the breasts flatten and the internal genitalia atrophy. The male characteristics do not appear simultaneously. The beard is often longest delayed. Symptoms sometimes develop very rapidly, but usually it is only after the lapse of several months that the change in the appearance of the patient is manifest. Walters, Wilder and Kepler have especially emphasized the appearance of this syndrome in conditions of adrenal cortical hyperplasia rather than of tumor.

An analogy appears to exist between the suprarenal cortical syndrome and that of hyperthyroidism as well as that of hyperparathyroidism. In each, apparent hyperfunction seems to follow the development either of tumors or of diffuse hyperplasia. Reduction of the mass of functioning tissue in either case, according to the Mayo workers, may be expected to induce return of normal conditions. On the other hand, just as the removal of thyroid or parathyroid tissue may induce myxedema or tetany, so removal of cortical tumors may at times result in acute cortical deficiency. The possibility of supplying the essential cortical hormone for longer or shorter periods, together with salt, until the balance can be reestablished, makes the outlook now decidedly more hopeful in the cases subjected to operation.

Surgical removal of cortical tumors has been followed in a number of well recognized instances by a marked amelioration of the symptoms. A case described by Gordon Holmes, for instance, showed resumption of menstruation after removal of the tumor, and gradual loss of the abnormal hair growth occurred after a few months. Unfortunately, follow-up reports are usually lacking of cases which have been observed

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for long periods after removal of these tumors. It is hoped that they will be recorded. Two of my own cases, both in young women, showed a resumption of menstruation within three or four months after removal of the tumor. In neither case was there much change in the appearance of the beard. One has continued to shave regularly and has been unwilling to coöperate to the extent of allowing the facial hair to grow in order to permit a study of changes in the rate of its growth or character. The voice in this woman is now somewhat more feminine than when first observed, and with the reappearance of normal, regular menstruation, the mental attitude is much improved. To say a cure has taken place, however, in any of these patients, we believe, has not been established.

In the experience at Baltimore, bilateral cortical hyperplasia often has presented certain characteristic clinical features in females, which differ from the tumor picture just described. Young and Howard have called attention to the fact that a curious anatomical anomaly is observed at birth, in the cases of cortical hyperplasia observed in the Hopkins Clinic. The phallus or clitoris is enlarged, and the urethra opens just below this organ, as in hypospadias, but without an external vaginal orifice. When the cystoscope is introduced into the vaginourethral sinus, the cervix may be viewed directly. The adult male characters in such patients vary in development. Evidences of virilism may appear as early as the second year; others seem normal in every way except for the congenital anomaly until the age of normal puberty, when male secondary sex characters appear. When these patients reach adult life they are usually small in stature and thick boned. Young and Howard have observed this syndrome due to cortical hyperplasia in two members of the same family twice in their series of ten cases. It has been reported only in females. Operative reduction of the mass of enlarged adrenal cortical tissue has not as yet produced an amelioration of symptoms in any of these cases.

No female patient should be operated upon for the possibility of cortical tumor resection without preliminary examination of the ovaries for the possible presence of a tumor such as arrhenoblastoma. This ovarian tumor may produce a picture of virilism clinically indistinguishable from that of a

suprarenal tumor, although more apt to develop during the active period of sexual life. Precocious puberty has also been reported to be associated with lesions near the floor of the third ventricle. The subject has been recently reviewed by Ford and is relatively very rare. Cortical adenomata have also been described associated with Graves' disease.

The relation of the syndrome just described to other tumors of the endocrine glands is awakening great interest, but no definite conclusions as to the underlying mechanism can yet be drawn. Particularly noteworthy are the similarities to Cushing's syndrome, or pituitary basophilism, to pineal tumors, to certain ovarian growths and to the so-called oat-cell tumor of the thymus, with secondary lung metastases. The clinical features of Cushing's syndrome, if not identical, certainly have many points in common with the adrenocortical syndrome, and hypertrophy or adenoma of the adrenals is frequently reported in such cases. It is after puberty that the pituitary basophilic and the adrenocortical syndrome closely approximate each other.

Differential points between the two conditions include the fact that the adrenogenital syndrome after puberty is generally confined to women, while the basophilic syndrome, although present usually in women, also occurs in men. The one is characterized by virilism, the other rather by depression and inhibition of sex function. It must also be stressed that cases of simple or of malignant cortical neoplasm may occur without evidence of the characteristic genitosuprarenal syndrome.

Crooke has recently reported a characteristic hyaline change in the basophil cells of the pituitary which he considers not to be an expression of cellular degeneration but rather of altered physiologic activity. It was found in 12 cases with the basophilic adenoma syndrome, associated not only with basophilic tumor, but also with thymus neoplasms, and neoplasms and hyperplasia of the adrenal cortex. The importance of this observation, if confirmed, obviously rests on the unitary basis which it suggests for the etiology of all of these diverse conditions. Differences in the hirsutism and in the form of obesity of adrenal, ovarian, and pituitary growths have been reported but are seldom of real differential diagnostic value. The pituitary has been associated

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with the "girdle" type of obesity, the adrenal with the "buffalo" type, and ovarian obesity is described as generalized. Very few cases of the adrenogenital syndrome are described in the adult male, and I regard its actual occurrence as somewhat uncertain.

Excretion of large quantities of female sex hormone has been reported with negative pregnancy tests in a number of patients exhibiting the genito-suprarenal syndrome. The excretion of follicular hormone has been reported to disappear or diminish promptly from the urine following operative removal of the tumor growth. There are no abnormalities noted in prolan excretion. The excretion of large amounts of male sex hormone is also reported. Marrian has recently described a new phenanthrene compound present in the urine of these patients.

The injections of air in the perirenal fascial planes (Gerote's fascia) has been found valuable in outlining the tumor and the gland on subsequent x-ray. Often, however, it is disappointing. In operative removal of cortical tumors it is highly desirable to secure bilateral exposure of the organs in order to determine clearly the diseased side, and to be sure that a normal appearing adrenal is present on the opposite side. Such an operative procedure has recently been described by Hugh Young. This is a highly important matter, since atrophied adrenal tissue may be found on the side opposite the tumor. Severe postoperative shock is relatively common. X-ray therapy is of dubious usefulness, although it is known that tumors arising from tissue with the same anlage, as testis, are sometimes susceptible to radiation.

The curious association of lesions of the adrenals with various types of infections must be noted. Particularly is this true in association with epidemic cerebral meningitis, the Waterhouse-Fredriksen syndrome, or "adrenal apoplexy." The lesions often include massive adrenal hemorrhages, and other less striking lesions, particularly necroses. These may also occur in measles, scarlet fever, smallpox and typhoid, and frequently commence in the zona fasciculata. In meningitis they are usually associated with profound neurotoxic symptoms, and particularly with the development of a marked rash all over the body. Tillett has observed a group of cases recently at Balti-

more. It is not known whether recovery can take place from such adrenal lesions, as they are only recognized at autopsy.

The classic example of cortical hypofunction is thought to be Addison's disease. It is rare, the admission rate at the Mayo Clinic being about 16 per 100,000. There are two principal etiological factors involved. Tuberculosis has long been recognized as the most common. In such cases, a history is often obtained of lesions healed long before in other regions of the body, particularly in the lungs, genito-urinary tract or bones. If a reliable account of previous tuberculosis can be obtained from the patient, such an etiology in a given case may be assumed to be highly probable. Fibrocaseous tuberculosis is the most common type found in the adrenal glands. With the intensive study of the clinical picture of Addison's disease which has followed the use of the newer methods of diagnosis and treatment during the past six or seven years, the importance of atrophy involving a progressive necrosis with collapse of the stroma of the cortex has assumed importance. In most of the series recently described, atrophy has accounted for more cases than has tuberculosis. Ten of our fourteen fatal cases (Johns Hopkins Hospital) have showed atrophy at autopsy. Only four exhibited tuberculous lesions, although three others died at tuberculosis sanitaria, and autopsy reports were not available.

In our series, women are in the majority, although in other statistics the disease is much more common in males. Susman has recently remarked on the prevalence of atrophy cases among women between 35 and 45, and he suggests that some strain in connection with the sex functions, possibly the menopause, may be a significant factor in giving rise to cortical adrenal atrophy.

The diagnosis of Addison's disease due to tuberculosis by the demonstration of calcification of the adrenals and the use of the x-ray has been extensively used at the Mayo Clinic, where one-third of the cases were found to show calcification. Our experience has not been so satisfactory. One case in which calcification was so demonstrated during life, showed no trace of tuberculosis at autopsy, the adrenal lesions being solely due to atrophy.

The signs and symptoms of Addison's disease may be briefly recapitulated. Pigmentation is usually the first symptom to

appear in the milder cases and may persist for a long time before any other sign appears. It occurs especially in areas exposed either to light or pressure, and develops gradually. The history frequently given is that pigmentation is noted in the autumn and is attributed by the patient to a summer's tan which has failed to fade. All degrees of pigmentation may occur, and during periods of remission it may recede. The exposed parts of the body are usually most affected, and also those portions normally pigmented, such as over the nipples, under the axillæ, about the anus, the penis or outer margin of the labia. Pigmentation is not common in the vagina itself. Points of pressure, as under shoe fastenings, the line at the margin of a corset, under tight garters or where bandages have been applied, or vaccination scars frequently show increased pigmentation. A peculiar pigmentation on which we lay stress is frequently seen in the creases of the palms or about the knuckles or nail beds. Black freckles and deeply pigmented moles are frequently seen. Leukoderma, which was described by Addison, is commonly seen. I have never seen definite changes in the retina. Most significant is pigmentation of the lips and of the mucous membranes of the mouth in individuals in whom natural racial pigmentation may be excluded. Sometimes the pigmentation is very marked indeed. Only last week I saw a man of 46 with symptoms of but two months duration whose mouth presented as extensive pigmentation as is seen in the normal full-blooded negro. There is a very definite relation between the appearance and intensity of pigmentation and the severity and progress of the disease.

The second symptom is that of asthenia and muscular weakness, which may become profound and associated with various mental disturbances and fatigue. The mechanism of this phenomenon is not well understood but disturbances of carbohydrate metabolism, of the production of lactic acid, and of liver glycogen storage, as observed experimentally, no doubt also occur in the disease. Asthenia is markedly aggravated during the crises. It is greatly relieved by treatment.

The third characteristic symptom, namely, gastrointestinal disturbances, varies with the condition of the patient. These are always aggravated during the crises and may readily be confused with acute abdom-

inal disease. Loss of appetite is one of the earliest and most constant symptoms of increasing severity of the process, and increase in appetite is one of the surest signs of improvement. The weight should be closely watched. Anorexia varies from a general absence of appetite to an utter loathing and intolerance of all food. Vomiting occurs in all grades of severity, but even patients in relatively good condition will vomit occasionally. Constipation is the rule but attacks of diarrhea are common during the crises. Acute disturbances are nearly always associated with a lowered concentration of the plasma sodium and chloride, and when these are raised to their proper levels, the distressing symptoms sometimes disappear completely. Loss of weight is frequently striking but most patients are not actually emaciated. As a result of under-nutrition, menstrual disturbances may occur but usually they appear surprisingly late in the exacerbations of the disease, or crises, which are characterized by a marked aggravation of the gastric symptoms, fall in blood pressure and marked asthenia. Terminal rise in temperature usually occurs during the 24 to 48 hours before death.

The physiological basis of the Addisonian crises probably lies mainly in the disturbed mineral salt metabolism. Recent work has also indicated that an actual antagonism may exist between sodium and potassium in this condition, the urinary excretion of potassium being prevented while a marked renal loss of sodium occurs. The kidneys seem to lose salt because of abnormal functional permeability.

This mechanism of the crises makes it possible to utilize a diet low in sodium as a diagnostic measure. This is probably the most reliable procedure at present available for demonstrating the actual presence of Addison's disease. It should not be utilized, however, if it is possible to establish a satisfactory diagnosis otherwise, as it is a serious and somewhat dangerous undertaking. For the purpose, it is usually sufficient to place the patient on a diet of fruits, or fruit juices, together with milk and sugar. In a patient with the disease, this simple régime will result in the production of a crisis of greater or less severity within twenty-four to seventy-two hours. It should never be persisted in for a longer period of time than is needed to establish the diagnosis. Often a matter of a few hours only

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will make serious difference in a therapeutic response. Weakness and distaste for food are the first symptoms complained of, usually with a fall in blood pressure. If nausea and vomiting occur, a grave condition is apt to supervene rapidly and the test must be stopped at once. A positive effect is associated with a drop in the concentration of serum or plasma sodium.

The treatment of Addison's disease involves the use of ample quantities of sodium salts and of a potent preparation of the cortical hormone. It is necessary to prescribe a definite daily quantity of salt no matter how well the patient may feel. To instruct him to take a well salted diet is not enough. If capsules are given, care must be taken that they are really absorbed.

The adrenal cortical hormone was prepared in a mildly active aqueous solution by Rogoff and Stewart and by Hartman in 1927. A potent extract was prepared by Swingle and Pfiffner in 1927, utilizing procedures which had successfully been used in the chemical extraction of estrogenic substances. Beef glands are generally used for the manufacture of this hormone although it has been claimed that other types such as pork have a higher concentration.

Parenteral methods of administration have hitherto been the only ones certainly effective. Oral preparations, including a charcoal absorbate of Grollman which is effective on adrenalectomized rats, have been used from time to time, but in our experience it is disappointing in the treatment of severe Addison's disease. Other methods, as with the use of a glycerol ex-

tract, may be useful in milder cases, and the charcoal absorbate, by mouth, may be useful in such cases. The recent demonstration of the chemical nature of the cortical hormone makes it highly likely, as with certain of the sex hormones, that oral administration, to a degree, at least, should be therapeutically effective.

The effective dose of the cortical hormone depends on the strength of the preparation and the severity of the symptoms. Our method is to use it as a supplement to salt only where needed, in dosage of 1 to 5 c.c. daily. Abscesses must be watched for, and infection and fever may precipitate a crisis. Recently the use of a diet low in potassium has also been advocated by Wilder and his group. Our experience has not indicated its great value. It is not an easy diet where food aversion occurs anyway. Gland transplantation has been disappointing. The use of adrenalin, as in the so-called Muirhead treatment, has been abandoned.

All in all, the increase in knowledge of the adrenals has been very rapid in the past six or seven years and if further progress occurs we shall, within the near future, I am convinced, see very remarkable improvements in our therapeutic resources and in our ability to cope with these interesting but distressing clinical conditions. It is particularly tempting to hope that with a further understanding of the relationship of the adrenal to salt and water metabolism, and to the pituitary, that an effective aid to the treatment of shock may become available.

The plagues that once swept the world have been very largely eliminated. Every generation shows that they have given to mankind a longer span of life. Man is healthier and happier because of the mighty legionnaires of medicine.

So, to you, the Guardians of Life:—Your profession is on the threshold of vast new discoveries that will revolutionize life on this earth. For you alone remains the romance of great adventure.

No matter how far you go into this new-found continent of science yet always there is a golden chain that binds you to us. It is a magic chain. If it is ever broken your quest for the golden fleece of knowledge will be in vain. The links of that bind-

ing force are your human contacts. Though you walk with kings you cannot lose the common touch. Still the greatest joy of your tasks will be to soothe a fevered brow and to bring into world-weary eyes the light of hope.

In this new, strangely complicated civilization into which we are rushing today, to you is dedicated the great task of not only keeping Man alive, but, more:—keeping alive Man's faith in himself.

No man, no profession, has any higher call to duty: "For of the most High cometh healing." —From the Medical Supplement of the *Detroit Free Press*, September 26, 1937. Reproduced here by permission.

CERTAIN READING DISABILITIES AS RELATED TO SPEECH*

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The difficulty encountered by many children of normal intelligence in learning to read and write has commanded the attention of several groups in our social system. Primarily, of course, the parents may be acutely distressed when confronted by such a situation. Secondarily concerned are those connected with fields of education, psychology, and neuropsychiatry. A study of the problem of reading difficulties is interesting to the neurologist in that it is closely associated with the whole question of the integration and disintegration of speech.

In 1928 Orton⁴ brought out an interesting paper dealing with reversals in writing and reading as well as mirror writing and the ability to mirror read. His excellent contribution gave rise to considerable discussion, as well as some confusion, in the minds of his readers.

He referred particularly to a specific reading and writing disability occurring in children of average or above average intelligence. Specifically, he states:

"Certain features which seemed to be common to the group were: (1) difficulty in differentiating p and q and b and d; (2) a striking tendency to confuse palindromic words like saw and was, not and ton, and to reverse paired letters and even whole syllables or words in reading so that they were read from right to left instead of left to right; (3) a considerable degree of capacity to read from a mirror—one boy actually read faster and with less mistakes with a mirror than without, and (4) a greater facility in producing mirror writing, i.e., in writing to the left with complete antitropic reversal of all letters."

In searching for an explanation of these particular difficulties, Orton brings out the theory of cerebral dominance and also that of visual levels. Before proceeding with our discussion, it will be necessary to quote him in full, particularly as regards the function and location of the visual levels and their relation to the term cerebral dominance.

"The first level serves to give awareness that a visual sensation comes from without and is not a recalled memory of things seen; in psychologic terms, this level furnishes the element of external awareness in sensation. This function, without much question, resides in the area striata or calcarine cortex of the occipital lobes. The second level, that of objective memories, serves as the storehouse for visual impressions of objects which have been seen. This function probably resides in the second type of occipital cortex which surrounds the calcarine or striate area. Up to this point the two hemispheres of the brain apparently work in unison to produce a single conscious impression; i.e., the messages relayed from the eyes to the two sides of the brain are fused so as to give only one impression. This is brought into relief by the fact that neither of these

functions is entirely lost as a result of the destruction of either hemisphere; a bilateral lesion is required to suppress the function of either the first or the second visual platforms. At the third or associative level, however, destruction in one hemisphere may result in complete loss of the associative function, resulting in inability to read (acquired word blindness), while destruction of exactly the same area in the opposite hemisphere will not give rise to any symptoms whatever. That hemisphere in which destruction produces loss of the associative function is called the dominant hemisphere, and may be either the left or the right, according to the side which habitually initiates the motor responses of the individual. *In other words, it is obvious that the visual records of one side only are used in symbolic association and those of the other are elided or inactive in this process.*"

"Structurally, however, there is no such contrast between the two hemispheres. The nondominant associative area is as well developed in size and complexity as is the dominant, and current neurologic belief (neurobiotaxis) would imply that this silent or inactive area must have been irradiated equally with the active to produce an equal growth. Such an irradiation, moreover, would presumably leave behind it some record in the cells of the nondominant side which one may call an engram. The engram in the nondominant side would be opposite in sign, however, from that of the dominant; i.e., it would form a mirrored or antitropic pattern. Under usual circumstances only one of these reciprocally paired engrams operates in association with the concept in reading, as is shown by the facts of acquired word blindness already cited, *and its antitropic or mirrored mate is elided or remains inoperative*. If, however, the physiologic habit of complete elision of these engrams of the nondominant hemisphere were not established, their persistence might readily serve to explain the failure to differentiate between p and q and between was and saw, and also to account for facility in mirror reading and mirror writing, and thus to explain those confusions of direction which have been extensively recorded in the literature and which as here described seemed to characterize all the cases of my own series. Since this conception of the disability as a physiologic variant differs so widely from the pathologic moment known to result in acquired word blindness, I have felt that the use of the term congenital word blindness was misleading and have offered the term strephosymbolia—twisted symbols—to demarcate better the series of cases showing this typical symptomatology."

When Orton postulated the idea of cerebral dominance in speech and its relation to particular reading difficulties, as mentioned above, and also when he conceived the idea of the three visual levels, he opened up the avenues for discussion of a perplexing and

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significant problem in speech integration as well as disintegration. One notes that the first level is one of visual awareness while the second level, "that of objective memories serves as the storehouse for visual impression of objects which have been seen."

In a discussion of the first level, we are immediately confronted by the psychological problem of "pure sensation" as related to meaning. Can one have memory of the visual impression of objects without realizing the meaning, at least to a certain extent, of the object? In other words, can there be such a thing as visual awareness without it being part of a perception? Must not other sensory and motor impressions enter into the picture as one realizes that he is dealing for the first time with something new? For instance, in acquiring the perception of an object such as an orange, vision, smell, taste, and touch all enter into its formation. Awareness is bound up in the definition of perception or knowing. It is difficult to conceive of being aware of anything new without its having some relation to our total behavior pattern. Vision alone would not suffice, and moreover it is a debatable question as to whether memory is the function of a localized part of the brain. Association enters into all brain function. For instance, in acquiring a perception of something new or foreign to our previous visual perception, one must necessarily use certain muscles, not only of the eye but of the rest of the body. In so doing, there is laid down motor imagery or, in other words, kinesthetic sensation. This motor imagery is coupled with the visual sensation and, in our opinion, cannot be separated from it.

As to the third visual level (symbolic level) and the difference in the engrams of the two halves of the brain and their relations to the reversals in reading and writing, there is room for considerable difference of opinion. In the first place, it is admitted that in the first and second visual levels the "two halves of the brain apparently work in unison to produce a single conscious impression: i.e., the messages relayed from the eyes to the two sides of the brain are fused so as to give only one impression." With that we agree and we are of the opinion that in the so-called third visual level, that level in which a symbol represents an object, the same mechanism takes place. We believe that the visual engram on the "dominant" side is the same as that on the

"nondominant" side and that there is no more reason for a reversal in visual memory of symbols than there would be in reversal of visual memory of objects. If, for instance, there were curved lines or scroll work on an object such as a chair, the visual engrams in the dominant and nondominant sides of the brain would be mirror patterns of each other and therefore could not fuse as is claimed for this level (visual memory of objects). Moreover in mirror writing where a reversed visual engram is presented, the child may and usually does write the mirror image never having seen it before. If we consider the visual engram only, how can one produce a reversed visual image never having seen it before? To that query, one might counter by asking still another question: How is it possible for the child so afflicted to read mirror writing which he never has seen before, faster than he can read normal writing? We will attempt an explanation not only of the last question but of the problem of reversals as a whole.

In the first place, it is well to mention that reversals in reading and writing occur principally in the left-handed child and according to Monroe are more common in the left-handed child who uses the right eye as the fixing eye than in the left-handed child who uses the left eye as the fixing eye. In the second place, we consider the problem to be principally a motor one, but not entirely so as will be brought out by further discussion. The work of Coghill¹ on amblystoma and his association of that work with the theories of the Gestalt school of psychology has an important bearing in our interpretation of the problem. He says: "The Gestalt school of psychology stands for total unity as the dominant principle governing mental processes. It seems, however, to have been concerned wholly with the processes that condition behavior, and to have entirely neglected the processes which determine the form of the behavior pattern. According to "Gestalt," a simple, pure or elementary sensation does not exist as such. There are no such units which combine to form perceptions. The perception is a "quality upon a ground": a total unity from the first. The apparently particular elements in consciousness emerge from a general field and exist only in relation to that field. This is equivalent, in the motor phase of the organism, to a totally integrated pattern in which par-

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tial patterns become more or less individuated.

"This principle is thoroughly demonstrated for *Ambystoma*, a typical vertebrate, and there is nothing in our knowledge of the development of behavior to indicate that the principle does not prevail universally in vertebrates, including man. There is no direct evidence for the hypothesis that behavior, in so far as the form of the pattern is concerned, is simply a combination or coördination of reflexes. On the contrary, there is conclusive evidence of a dominant organic unity from the beginning. That evidence appears not only in the manner in which behavior develops, but particularly in the manner in which the nervous system puts the principle into effect, for, as shown in the first lecture, the nervous system concerns itself first with the maintenance of the integrity of the individual, and only later makes provision for local reflexes." For instance, he explains that "the first limb movement is an integral part of the total reaction of the animal and that it is only later that the limb acquires an individuality of its own in behavior. The local reflex of the arm is not a primary or elementary behavior pattern of the limb. It is secondary and derived from the total pattern by a process of individuation. In the further development of the behavior pattern of the arm, the same principle is observed: The first elbow flexion occurs with action of the arm as a whole, and the forearm only later acquires the independence of a local reflex. *So also is it with the movement of the hands and the digits.*"

Herrick,⁸ in his comprehensive studies on comparative anatomy and physiology, expresses much the same idea when he states:

"In the course of this evolution we can follow the transition from the simplest sort of *mass-action* to very complex reflex and instinctive patterns and from the latter to control of behavior by individually learned and cortically directed analysis of experience, which culminates in the fabrication of conscious symbols and rational control. On the structural side we see a gradual transfer of the center of physiological dominance and integration from the midbrain to the striothalamic complex and, in the third stage, to the cerebral cortex parallel with the shift from physiological conditioning to intelligently directed motivation."

The evolutionary significance of some of our simple body movements would seem to fit in with the above theory. We will consider, for instance, one individual set of movements, such as the spreading of the fingers of the right hand, a movement which may have been connected with swimming. One can readily see that such a voluntary movement executed with any degree of accuracy would necessarily come later in our development than voluntary movement of the extremity as a whole. The similar set of spreading movements of the left hand is developed at the same time, particularly when regarded with coördinated acts such as swimming. On analysis, we notice that these movements of not only the fingers of the two hands but the arms in swimming movements are mirror images of each other.

They are much more easily executed than if one attempts to adduct the fingers of one hand while spreading or abducting those of the other. Whatever highly individuated reflex motor patterns are acquired by one side of the body, their mirror patterns are acquired by the opposite half of the body, but not to the same degree of accuracy in their execution. These engrams, or patterns, although called motor are in a sense sensory or more accurately sensory-motor in that we record in our mind a memory of the movement. This is kinesthetic sensation or motor imagery. The same motor imagery or kinesthetic sense is involved in such a highly complicated act as writing. It has been observed previously² that the average right-handed person is able to write mirror writing with the left hand when, simultaneously, he is writing with the right hand and in the opposite direction; that is, from left to right. However, in so doing the mind must be kept on the writing which is being carried out by the right hand and the left hand be allowed to simply follow along and assume its own course. The writer has noted that a left-handed individual who has been trained to write right-handed does not make this mirror pattern when writing with the pencil both in the right and the left hands. The same reflex mechanism occurs in making loops or circles when using, simultaneously, one pencil in the right hand and another in the left; that is if the direction of movement with the right hand is clockwise that with the left hand is counter-clockwise. In the process of acquiring integration of this clockwise movement with the right hand, the eyes in conjugate movement rotate in clockwise manner. We have observed that the right-handed person can rotate the eyes clockwise much faster and in better coördination than in the opposite direction. Rotating them in the opposite direction is comparable to a right-handed person attempting a left-handed movement.

If it so happens that in the right-handed person the left eye is the fixing eye or in the left-handed person the right eye is the fixing eye, one naturally would expect that the head would be inclined to turn toward the side of the handedness. This asymmetry of handedness and eyedness adds much to the confusion in the child's mind as to the acquiring proper direction of movement in both reading and writing in

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that it has a tendency to disrupt the total pattern acquired previously.

If one has difficulty in acquiring the proper direction of movement in learning to write and read, is it not reasonable to assume that he has the same confusion or difficulty in acquiring visual perception of an object? The eye movements take part in the process of acquiring that visual perception, and it is quite possible that when one first perceives an object, the conjugate eye movement is from right to left in a left-handed individual. This right to left movement is undoubtedly accentuated in the left-eyed person. Thus, when a child of this type is first presented mirror writing for inspection, the conjugate eye movement used is from right to left, and there is an immediate association with the motor imagery, which already has been laid down as a part of the total pattern when he was learning to write with the right hand. Thus the reason for reading mirror writing faster than normal writing is explained. The engrams are visuo-motor and the body movements of the whole left side form the dominant pattern, but one must not lose sight of the fact that they are a part of the total pattern.

One often notices the left-handed person write with the hand in what can best be described as an "upside down" position (acute flexion of the hand on the wrist), with the point of the pen facing the writer. If one stops to analyze that movement, he will find that although the pen moves from left to right, the hand movement itself with relation to the rest of the body is a right to left movement.

In certain cases of aphasia, one may encounter directional confusion not only in reading, writing, and spelling, but also in arithmetic. This was admirably demonstrated in a case reported by Singer and Low.⁶ We have been interested in a case which has, in our mind, an important bearing on the problem.

Mr. T. D., an accountant of forty-eight years of age, suffered a severe cerebral concussion a year and a half previous to his first visit to my office in August, 1932. At that time, he still complained of difficulty with his vision, a certain amount of headache and dizziness, and inability to calculate with any degree of accuracy. He also had noticed that he was occasionally writing "was" for "saw" and vice versa. He made numerous mistakes in typing, almost all of which he was unaware. As a child the patient was distinctly left-handed, but he had been forced to learn writing with the right hand.

The eye consultant reported the following: "Vision, 6-6 in each eye. This is slightly worse than

before. There is one degree of exophoria for distance, four for near. The abduction is five and the adduction is four. The fundus and tension of each eye are normal. The fields show a marked change, there being a left homonymous hemianopsia for both form and color. The remaining form field is considerably contracted in the right and greatly contracted in the left eye. The fields are not tubular and do not have the characteristics of either hysteria or malingering." Fields taken five months later were practically identical with the above. Central vision was preserved in either eye.

The defect in the visual fields would necessarily point to a lesion of the right optic tract posterior to the chiasm. And yet with the visual memories of the right occipital lobe not functioning, the patient presents the recent problem of reversals. This case would seem to point strongly to the fact that the difficulty is not primarily visual but kinesthetic.

There is still another interesting as well as perplexing situation as regards certain aspects of cases of so-called total aphasia. The lesion is usually confined to the "dominant" hemisphere and, as in a recent case of mine, resulted in a complete right hemiplegia, the left side being normal in all respects. The question is: "Why is there total aphasia and why should not the individual have retained speech up to the five year level, the time at which his handedness first began to function as regards reading, writing, and spelling?" One would surmise, without being definite by any means, that even with the acquisition of the earliest perception of speech, *handedness and motor imagery involving all muscles of speech* had entered into this physiological and psychological problem. Further, if the handedness as a factor in the motor imagery is interfered with by the paralysis, speech is destroyed as far as the earliest levels. The total pattern of the five-year level has been disrupted.

Another interesting phase of this whole problem is the possibility of an hereditary basis in connection with handedness. Monroe states that according to her tests, about eleven per cent of children in one group were left-handed. This left-handedness persists regardless of the fact that they are living in a right-handed world. Suppose the conditions were reversed. We should then undoubtedly find that the same percentage (eleven) were right-handed. We have then the two extremes, of left- and right-handed individuals, whose adaptability is such that they would remain right- or left-handed regardless of the handedness in their

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environment. Together they constitute from twenty-two to twenty-five per cent, while the group in between the two extremes with balanced body symmetry constitutes seventy-five to seventy-eight per cent. The latter group becomes right-handed in a right-handed world, or would become left-handed in a left-handed world. Then, according to all the laws of probability and chance, there are at birth as many left-handed people as right-handed people, and the three to one ratio exists only as regard body synergy and asynergy.

This theory would account for the adaptability of the Semitic race, who were at one time supposed to be left-handed (Critchley) and to have written from right to left, while at present the opposite is true. It does not seem probable that if cerebral dominance were the initial factor in the question of handedness and its allied problems, the handedness of a race or any part of it would change so completely from one type to another. That does not happen, in our opinion, according to laws of heredity.

However, according to the theory which we have postulated above, a change of handedness and direction of writing could easily take place because seventy-eight per cent or thereabouts are in perfect body balance or in a condition of perfect synergy as regards the two halves of the body at birth.

What, then, is the practical application of the whole question as regards the parent and teacher? And what steps should be taken to aid in alleviating the situation? We offer the following suggestions, almost all of which are in agreement with those as noted by Orton.⁵

First, the handedness and eyedness of the child should be determined as nearly as possible by the kindergarten teacher.

Second, psychological tests should be given for visual and auditory memory, and for the defects in association between the two.

Third, if there is confusion as to the handedness, it would be well to encourage the child to use the hand on the same side as is the fixing eye. In this way, one encourages the development of reading, writing, and arithmetic as evolving from the total pattern.

Fourth, in the teaching of writing to the left-handed child, allow the paper to be placed at the left upper corner of the desk, and allow and even encourage the child to

write backhand. The teacher, in marking such a child in writing, should not compare his work with a right-handed standard, but with a good backhanded slant.

Many of these children acquire ideas of inferiority through their inability to conform to a right-handed pattern.

Fifth, the left-handed child who is having difficulty in reading, writing, or spelling, should be given an opportunity to read aloud and to use a pointer as in reading at the blackboard. If there is extreme difficulty, allow him to use the forefinger of the left hand in reading from his book. In that way all of these motor movements, such as tongue, lips, and finger, which grow out of his total pattern, aid him in establishing the proper direction (left to right).

Sixth, inasmuch as this type of case is apt to have confusion in the visual patterns on account of confusion in direction, it is well to stress the phonic method of teaching early in their school career. They should learn the alphabet and fundamental syllables, and learn to build up words from the fewer number of symbols than the visual-minded child who is also right-handed, and in whom the patterns fit with his previous total pattern.

Seventh, on account of the asymmetry of the pattern in the left-handed child who is constantly forced to move in a different direction from that which is normal to him, he is apt to show disturbances in rhythm, so that early in his speech training he should be taught simple rhymes, poetry, and music. Few of us realize the rhythm expressed in the eye movements in our ordinary silent reading.

Very little provision has been made in the average school class room for the left-handed child, when one considers the awkward and even fatiguing position the left-handed child must assume in using a seat or recitation arm rest that is built entirely for the accommodation of the right-handed child. All that is necessary for us who are right-handed to realize this is to imagine the inkwell and arm-piece in the recitation room placed on the left side.

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NEUROSYPHILIS—THE IMPORTANCE OF EARLY DIAGNOSIS AND NECESSITY OF SPECIALIZED THERAPY*

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We are all familiar with the tremendous effort that is being made to wipe out syphilis in the United States. This concerted attack on "Public Enemy Number One" among the dread diseases affecting human life is a great step forward in the betterment of mankind. However, stamping out or preventing the development of new infections is not enough. Our institutions for the blind and insane will continue overcrowded for many years to come unless a more specific effort is made by the Medical Profession to recognize and properly treat early neurosyphilis. One might almost refer to the neurosyphilitic as the "forgotten man" in the treatment of syphilis. To my mind, too great emphasis is placed on blood serology and routine mass treatment, and far too little importance attached to the spinal fluid examination.

According to a recent report compiled by the Coöperative Clinic Group,¹ nervous system involvement was present in 53.4 per cent of the cases in which spinal fluid examinations were done. The Mayo Clinic² reports, on repeated surveys, that 65 to 78 per cent of the syphilis seen there had a neurosyphilitic aspect. Nervous system involvement, therefore, must be recognized as a potentiality in every case of syphilis, and, since the spinal fluid examination is the only positive diagnostic procedure, it seems inconceivable that such a simple, precautionary method is so often neglected.

I know of no satisfactory routine method of treating syphilis. Each case presents its individual problem and requires individual treatment. Proper treatment procedures, then, lie solely within the discretion of the attending physician. Unfortunately, the use of fever therapy has been almost entirely confined to institutional practice and the hyperpyrexia machine is not available to many physicians, especially those in the smaller communities. Routine mass treatment, consisting of continuous injections of arsenicals and heavy metals, unquestionably will reduce the incident of neurosyphilis, but far too many nervous system involvements develop under this mode of treatment to allow us to assume it is adequate in arresting this phase of the disease. The arsphenamines and heavy metals do not permeate the nervous tissue in sufficient

quantity to effectually cope with neuro infection due to the hemato-encephalic barrier, making supplementary and special therapy procedures mandatory. I believe it is an accepted fact that the use of fever therapy is imperative in the treatment of paresis and taboparesis. Authorities differ as to the comparative merits of hyperpyrexia induced by external methods and heat produced within the body. The shortage of hyperpyrexia machines and the cost to the patient may be the determining factors in many instances. Fortunately fever therapy, produced by malaria or typhoid vaccine, is available to all at a comparatively low cost. Citrated malarial blood, which will remain infectious at almost any temperature for at least 48 hours, can be procured from almost any public medical center.

The favorable results and apparent clinical arrest of nervous tissue deterioration by the use of fever therapy in asymptomatic neurosyphilis, where this diagnosis is made by spinal fluid examination, range with different observers from 95 to 100 per cent. Wile and Hand³ report arrestment in 95.7 per cent of cases. Moore,⁴ in his "Modern Treatment of Syphilis," reports complete remissions in 30 to 40 per cent of paretics treated with fever therapy, but only 3 to 5 per cent complete remissions where routine arsphenamine and heavy metals were used. These figures certainly argue convincingly in favor of fever therapy.

With the induction of malaria, the question of possible danger to the patient naturally arises. Here, again, the importance of early recognition of neuro involvement should be emphasized. Certainly better therapeutic results may be expected and the risk to the patient minimized if the treatment is begun early in the course of the disease,

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before extensive tissue damage has occurred. Then, too, induced malaria is easily controlled, differing from the natural disease in its great susceptibility to quinine.

Typhoid vaccine, though not as extensively used, certainly has a definite place in neurosyphilitic therapy, especially in certain cases where malaria is contra-indicated. Typhoid vaccine, being much easier to obtain, can be used in isolated communities where the use of malaria is not feasible, and in cases proving immune to malaria. The mortality rate is exceedingly low in this method of treatment and authorities such as Kulchar and Anderson² contend that it compares favorably with other forms of fever therapy.

Touching briefly on intraspinal therapy, I believe its value in the treatment of syphilis is a debatable question among syphilologists. However, I am of the opinion that medical science has not as yet developed an adequate substitute for intraspinal therapy in the treatment of primary optic atrophy and tabes dorsalis. Moore,³ together with other notable authorities, reports an improvement or arrestment in more than 50

per cent of primary optic atrophy treated by intraspinal therapy. Considering the excellent results obtained from its use, and considering the fact that optic atrophy results almost invariably in complete blindness under routine arsphenamine and heavy metals, it would seem that the merits of intraspinal therapy must be acknowledged.

I have made no attempt here to go into detail regarding treatment procedures, and have purposely omitted mention of tryparsamide and other therapeutic measures because the purpose of this paper is simply to emphasize the crying need of an early diagnosis and the use of specialized therapy in the treatment of neurosyphilis.

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EDUCATION IN MATERNITY ESSENTIAL TO PUBLIC HEALTH

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It was in 1912 that the first Bureau of Child Hygiene was established in a city health department in this country as a permanent part of that administrative branch of civil government, and in 1914 the first such bureau was developed in a state department of health.

Dr. Josephine Baker, the director of the Bureau of Child Hygiene in New York City, created as a major activity for the protection of infancy and childhood the Little Mothers' Leagues in the high schools of that city, through which even more than by the baby stations was the process of education of mothers in the care of their children successfully promoted.

Progress in the breadth, depth and quality of education for the saving of infant lives has been continuous and effective in the past quarter century until we now enjoy throughout the nation lower infant mortality rates than have prevailed at any time in human history among so large a population under one government and including such a variety of race stocks, economic and occupational conditions, distributed so widely in geography and climate.

From concern exclusively with the survival of the babe at least through its first year of life and with the diarrhea and en-

teritis which was the chief hazard to its life, the scope as well as the name of the bureaus or divisions of health departments serving this constantly expanding and perhaps most important of all the fields of public health, has been broadened to include every stage of the human reproductive cycle from the conception of the new life to the achievement of bodily and mental maturity.

We now have as a declared and established standard function of local, city or rural, state or provincial and national or federal health services in most modern na-

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tions that of the bureau or division of maternity, infancy and child hygiene.

To such an audience as this it is quite unnecessary to recall to your attention or to review the subdivisions of this field in any detail, noting only that there are services to be rendered, preferably by the private practitioner of medicine in his intimate personal relation to the individual and the family for the guidance of the expectant mother, the protection of the infant, the periodic supervision of the runabout or preschool child, the health management of the life of the child while it is still subject to the compulsory education laws and until it is free to enter industry and self-support, at approximately the age of maturity or a few years before.

What more could be asked of public health authorities than to promote through public information, to develop by educational methods, to supplement by services for those unable to meet the cost of private medical guidance in health, the comprehensive range of professional activities of the practising physicians of the community on behalf of the survival, the integrity and vigorous health of the family, which is, after all, the basic unit of our modern society and never more precious or essential than now to a continuity and progress of our civilization?

This is the sort of challenge which rises to face the health officer and the community he serves, whenever he begins to feel satisfied or complacent with his health program and its progress.

We might as well admit that we shall never achieve an end point, a perfection of endeavor for health, as long as the curiosity and resourcefulness of the human mind continues to discover new biological facts and improvements in their application.

While new knowledge is often disturbing, generally criticized, and usually uncertain in the results it leads to, it must be accepted as an axiom among sanitarians and practitioners of preventive medicine that whatever is true and affects favorably the quality, quantity, creation or survival of human life is worthy of study and practice.

The reasons for our present discussion are that the embryologists, comparative anatomists, general biologists, chemists, sociologists, statisticians, as well as psychiatrists, obstetricians, gynecologists and pediatricians among the specialists of medicine have made

new observations and developed new facts and technics which have disturbed the traditional patterns of contemporary thought, and social usage, and have challenged the medical profession, legislators, the courts and society itself to take action consistent with the facts, lest damage develop to the most precious values of human relationships, and a hazard to national and cultural survival become acute.

Facing facts always calls for courage, and one way of measuring mental and emotional maturity and health, whether individual or social, is the manner in which persons, the family and the community face new facts and alter their conduct and attitudes according to the evidence and ethics of the situation.

And now, I see from your faces that you wonder what this glimpse into well-known history, and the repetition of philosophical generalities have to do with the practice of public health in Michigan or with the interests of the Maternal Health League of this state.

Just this, that in the past few decades it has become obvious from a great mass of detailed and corroborated information, coming from the several fields of science already referred to, that further protection of women in both the unmarried and married state against unsuitable, undesired or unsafe pregnancy requires a variety and quality of information not universally available to men and women under competent or responsible authority.

Furthermore, that many of those intending marriage are crudely ignorant of the mutual biological and psychological obligations, hazards and opportunities of the married state, and that such ignorance commonly leads to much marital misfortune and is one of the factors leading to divorce which occurs in one of every six marriages in the United States and to the prevalence of abortions undertaken for other than distinctly pathological conditions in the mother, and carried out under conditions which lead to an enormous loss of maternal life. About one quarter of all maternal mortality follows abortions. About one half of all abortions are illegal or criminal. There is about one abortion for every two or three pregnancies. More than half of the women who have borne children have had one or more abortions. Ten per cent of all abortions are

in unmarried women. The five major external factors leading to abortion are, economic distress, occupational necessities, illegitimacy, domestic relations, and fear of confinement.

However, probably more important than either the protection of the body of the married woman against uncontrollable conception, or the hazard to the mother of artificial interruption of pregnancy, is the potential benefit to offspring from understanding by the parents of the biology of conception and the principles of marital hygiene. It would appear obvious that such knowledge as is in the possession of mankind bearing upon the quality of inherited characteristics and upon the encouragement of superior, and the gradual diminution of inferior, elements in human stock, can be applied chiefly although not exclusively through the education of young men and women prior to and during married life in the years of potential productivity.

With a falling birth rate throughout all occidental nations, and a selective and relative infertility of those elements of our population from which the best quality of human stock should be expected, there are good theoretical and practical reasons for providing under official and approved voluntary auspices such sources of information as will tend to contribute to racial improvement, and to counteract by encouragement of childbearing among the fit and competent the present deteriorating effect of unconsidered procreation among those least able to create offspring and rear them in health.

Specifically, it appears to be necessary and timely for official health agencies of state and local government to add to the existing functions of their bureaus of maternity and child hygiene that of marriage advice and of counselling in the interest not only of a eugenic effect upon the next generation but as a very immediate and practical means of reducing maternal and neonatal mortality.

The question of legality of advising on contraception was settled by the decision of the Federal Circuit Court of Appeals for the Second Circuit, in December, 1936, in the case of United States vs. One Package, parts of which I quote:

"It is true that in 1873, when the Comstock Act was passed, information now available as to the evils resulting in many cases from conception was most limited, and accordingly it is argued that the language pro-

hibiting the sale and mailing of contraceptives should be taken literally, and that Congress intended to bar the use of such articles completely . . . yet we are satisfied that this statute . . . embraced only such articles as Congress would have denounced as immoral if it had understood all the conditions under which they were to be used.

"Its design, in our opinion, was not to prevent the importation, sale or carriage by mail of things which might intelligently be employed by conscientious and competent physicians for the purpose of saving life, or promoting the well-being of their patients. . . . The policy of Congress has been to forbid the use of contraceptives if the only purpose of using them be to prevent conception in cases where it would not be injurious to the welfare of the patient or her offspring; it is going far beyond such policy to hold that abortions, which destroy incipient life, may be allowed in proper cases, and yet that no measures may be taken to prevent conception even though a likely result should be to require the termination of pregnancy by means of an operation. It seems unreasonable to suppose that the national scheme of legislation would involve such inconsistencies and should require the complete suppression of articles, the use of which, in many cases, is advocated by such a weight of authority in the medical world."

Health officers, therefore, under this decision, should not be legally hampered in adding contraceptive service to the existing functions of their Bureaus, unless, as in the case of Massachusetts, state laws constitute a barrier which, in Michigan, is not the case.

As has occurred in so many of the fields of public health, private initiative and resource, the vision of individuals, and the social concern of groups of like-minded and public-spirited citizens, have preceded the necessarily more slowly moving and conservative action of agencies of civil government. Practically all the innovations in the field of maternity and child hygiene, of visiting and public health nursing, of the practice of preventive medicine in tuberculosis, syphilis, gonorrhea and industrial hygiene, now all included in the programs of health departments, were proposed, tested in practice, found to be effective and promoted to the public by non-official agencies before they were accepted as necessary by health departments, or tax monies were provided for their operation.

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It is now almost ten years since the Ministry of Health of Great Britain permitted, and five years since it formally endorsed, the inclusion of contraceptive advice and marriage counselling among the duties of local maternity centers by physicians competent in gynecology. For much longer periods have these functions been served in some other European countries by government, through health and school officers and by authorized activities of churches of all denominations, and by non-official or voluntary associations with interests similar to those of the Maternal Health League of Michigan.

In the United States today there are in operation not less than 311 consultation centers under voluntary auspices, 123 supported in part or wholly by public funds, and of this number 39 are in city or county health departments where some or all of the educational and technical services are now offered and availed of within the law to a constantly increasing extent. Of the total of 434 such centers in forty-two states of the United States, 353 are medically directed.

In addition to these centers, which are primarily for contraceptive advice, during the last few years an increasing number of marriage advice and consultation bureaus has been set up.

Among these are four in New York, three in California, two in Ohio, and one each in Illinois, New Jersey, Pennsylvania, Michigan, and Massachusetts. In each of these bureaus people who have studied the problems of marriage and are competent to give helpful advice, act as consultants.

While I am of the personal opinion that the kind of information which is needed and the character of consultation called for should under ideal social and professional relationships be provided in the normal activities of the family physician at his office or in his patients' homes, I recognize the fact that medical and social education of physicians in the past has not prepared many of those now practicing to meet unaided the reasonable demands for information and guidance of those considering or actually entering upon marriage, and for this reason it seems to me essential that, with the co-operation of voluntary or governmental hospital out-patient departments or independently, but in any event with the close collaboration of the organized medical profes-

sion, and with the helpful assistance of the public health nurses and social workers of the community, each full time unit of local public health administration provide itself, or encourage the establishment under private auspices of a consultation and advice service for men and women, married and unmarried, where information related to the function of reproduction, be made available for the purposes of reducing sickness and death among women and children.

This responsibility seems to me of a kind which must be accepted, if for no other reason, because misinformation of a mischievous and misleading character is now being commercially promoted for purposes of profit or immorality to the discredit of biology and the detriment of contemporary society. The best way to correct abuse born of secrecy, shame, fear and prudery is the responsible statement of facts to those capable of understanding them by persons legally authorized to practice medicine.

That this proposal is not merely the dream child of a moment of wishful and visionary thinking on my part can be understood from the fact that since 1931 I have been an officer of the National Committee on Maternal Health, and its predecessor the local committee, with its offices at the New York Academy of Medicine. Under the auspices of this committee have been carried on continuously through the past fourteen years medical and social research in the field of fertility and sterility as these bear upon maternal health, and most of the important professional contributions in this country to our present medical knowledge of contraception and the methods and results of the various methods of its application have been published under the auspices of this committee.

Furthermore, I venture to quote from two professional contributions I have offered elsewhere on this subject, one before the American Public Health Association in 1934, the other to the annual meeting of the American Eugenics Society as a report of a sub-committee of the Public Health Relations Committee of the New York Academy of Medicine in 1937.

In an address at Pasadena, in 1934, I ventured the following statements and have had no reason since then to alter them:

"Closely related to the problem of syphilis, which is primarily one for physicians, sanitarians, nurses, and educators to solve, is that of a health service for marriage advice, primarily in the social inter-

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est of family security, but inseparable from medical, legal, and educational implications.

"From the early, much criticized, highly controversial, sometimes legally interdicted efforts to translate biological knowledge into common usage by married women and their husbands, through offices or clinics, as frankly contraceptive information, by persons of medical or less competent qualifications, there has been abroad and in the United States a steady growth in the understanding of the useful functions such agencies might serve, the social and educational and preventive medical concern they have for a mature society, and the auspices under which they may safely be operated."

"Since the origin of marriage counselling in 1922, under public control in Vienna, the German speaking countries of Europe have developed a total of 1,100 such centers, of which 900 are under private auspices. The first official bureau was opened in Berlin in 1926; Switzerland opened official marriage advice bureaus in Zurich in 1931 and Basle in 1933. Approximately three quarters of those who come for advice are concerned with problems of sterility, contraception, therapeutic abortion, and medical conditions contraindicating pregnancy; the majority of the remainder seeking information on questions of inheritable and congenital defects and disease, where mental abnormality, tuberculosis, and syphilis exist or are suspected in the family; and a substantial number are concerned with the physiology and pathology of sex adjustment, before and during wedlock. These stations are under some appropriate legally recognized religious, health, educational, or other professional auspices such as we are familiar with in the origin and promotion of prenatal, baby health, tuberculosis, and venereal disease clinics in this country."

"The greatest service of the agencies at present operating in the large and small cities of the United States, aside from their contribution to competent professional education in contraception, is that of preventive medicine in the fields of venereal disease and pelvic cancer."

"... For our needs at present in this country a physician, nurse and social worker especially prepared for such a responsibility will be required at each such station.

"Both mental hygiene and social hygiene, as these terms are used in our countries, should benefit by the official inclusion of a marriage advice service under the health department or in connection with the outpatient service of a general hospital.

"This innovation will require some social initiative, imagination and courage, in all of which it should be expected that the health officer should share or actually lead."

"Let us teach for the sake of women the knowledge which will permit them to choose the time and circumstances of their own childbearing."

If I were to express the objective to which I believe the more wide-spread availability of marriage counselling would contribute it would be about as follows:

"Let us set aside a fair portion of our determination to see to it that the babe is well born, into a world free for the exercise of his entire capacity for advance of his own and his fellows' lives, without sacrifice of the lives of others as a condition of his own survival."

Among the elements of a program for the practical application of eugenics I offered the following:

"It seems to me that no hindrance of tradition, re-

ligion, law or social fashion of conduct can long delay the progressive spread of a body of fact increasing in accuracy and practical usefulness and safety which will free women of most of the uncertain, accidental, and almost thoughtless occurrence of pregnancy.

"Only when the circumstances of a new life can be calculated, predetermined, chosen with forethought and planned for, and, per contra, undesired and undesirable creation of life can be with certainty and safety prevented, shall we have the essentials upon which to build a manner of family, the begetting and rearing of children, to satisfy the reasonable ambitions of those who would apply genetics for eugenic ends.

"All knowledge has carried hazards of misuse. Many a priceless fact has been exploited for selfish ends.

"However, curiosity is perhaps man's most precious attribute after his capacity of inhibition or self-control.

"The medical profession exercises, as it were, the trusteeship of society in all sciences and arts which may prevent disease, and make its occurrence more bearable, and less likely to shorten life. Society will do well to demand of medicine that it consecrate its treasury of resources and its good repute to the even broader and more enduring values of constructive guidance to better structure and function of man's body, to a more perfect life of thought, and emotion, conduct and social adaptability, and to the longest span of human life which is consistent with continuous use and happiness to the end."

Let me repeat my recommendation that official state, municipal and rural health departments where served by full time health officers in the State of Michigan include in their program of services the counselling of men and women in the hygiene of marriage and where necessary in the control of conception in the interest of the health of mother and children in the family.

If this objective cannot be achieved through tax supported official agencies the necessary services should be encouraged, when they are supplied by voluntary efforts acceptable to the medical profession.

Probably a greater reduction in the mortality of women from causes related to their reproductive function would result from general knowledge among married people of the safe and effective means of controlling conception than we can achieve by any other resource at our disposal.

An understanding coöperation among practicing physicians, local health officers, nurses and social workers is necessary in this as in other fields of maternal and child hygiene. These four groups concerned with preventive medicine should be able to carry out the simple educational effort required without offense to any of the good qualities of modern society and with definite benefit to the health of women and their children.

SULFANILAMIDE IN UROLOGIC INFECTIONS*

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In the brief span of three years since its introduction¹⁰ probably no form of chemotherapy has attained such universal acclaim as sulfanilamide. It has been employed in an effort to combat infection of all types and in many cases with considerable degree of success. The mechanism of its action has been studied by several, including Colebrook and Kenney⁵; Long and Bliss.²⁰ The fact that it is excreted to a very marked degree in the urine in either its free or conjugated form has been demonstrated by Long and Bliss²⁰; Marshall, Emerson, and Cutting²¹; Helmholz and Osterberg.¹⁵

While not proposed originally for use in the urologic field, it has nevertheless, as we are all aware, captured a leading position among our therapeutic weapons in infection of the uro-genital system.

R. D. Herrold¹⁶ in February, 1937, observed that the urine obtained from a patient receiving sulfanilamide remained clear upon incubation and thereupon administered it to patients with infection of the upper urinary tract with surprisingly successful results in some cases wherein other recent therapeutic agents, including mandelic acid, had failed of such accomplishment. He¹⁷ very kindly suggested it for our use upon the seventh of March with the view of evaluation as to its action in all types of urinary tract infection, including gonorrhea. We have since that date kept careful records of these patients more with the purpose of reaching our own conclusions rather than from that of subsequently reporting our findings.

The results of this study demonstrated to our satisfaction several facts which appear incontrovertible and all of which have without question previously been reported elsewhere from some special viewpoint. We have endeavored to correlate all the advantages and disadvantages as they have appeared in this group of cases. The vast majority of these were private patients of an ambulatory character though a few were hospitalized. This group may be said to fairly represent the type of case consulting the average private practitioner who does not have available institutional supervision or control.

We have endeavored to determine the efficiency of this new agent as compared with other forms of therapy as well as evaluate the reactions of the drug as to fre-

quency, character, and degree. This group of cases includes only those urinary tract infections uncomplicated by obstruction or those in which the obstruction has been relieved, and it is possible that the ultimate risk in the administration of the drug is definitely increased in the presence of obstruction, as pointed out by Marshall, Emerson, and Cutting²¹ and R. D. Herrold,¹⁶ the excretion being possibly delayed with impaired renal function, and one may raise the question that the physiologic saturation point of the body might be definitely elevated in such cases. Evidence that such is not the case, however, is advanced by Cook and Buchtel⁷ in reporting two cases placed upon sulfanilamide treatment in whom the urea nitrogen exceeded one hundred milligrams per one hundred cubic centimeters without untoward result.

In all, two hundred and three cases with an additional eleven cases studied separately by one of us (J. F. Harrold) have been considered in this survey, additional cases having been discarded for lack of complete data. These cases were grouped as follows: Gonorrhea (male), eighty-five; gonorrhea (female), fourteen; urethral stricture, seven; non-specific urethritis, twenty-five; pyelitis (male), seven; pyelitis (female), forty-four; postoperative, twenty; renal tuberculosis, one.

It has been pointed out by many^{1,3,5,6,9,11,13,14,18,19} that the use of this agent is not without danger and a careful record was kept of all patients under treatment from the point of view of determining the deleterious effect, if any, from the symptomatic reactions. These we find, as has been observed by almost all authors, were extremely varied and occurred to some degree in the surprising number of one hundred eight patients

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out of a total of two hundred three. In no case was symptomatic reaction suggested to the patient but all complaints were volunteered. A number of patients complained of several and varied symptoms and for the sake of discussion we have grouped these into four general headings: Gastro-Intestinal, Central Nervous System, Dermatoses, and Systemic.

TABLE I. REACTIONS

Gastro-Intestinal:	
Anorexia	6
Nausea	32
Vomiting	3
Diarrhea	1
Total	42
Central Nervous System:	
Headache	8
Vertigo	14
Tinnitus	0
"Nervousness"	8
Paresthesia	2
Total	32
Skin:	
Pruritic Dermatitis	4
Purpura	2
Total	6
Systemic:	
Extreme Malaise	8
Fatigue	68
Cyanosis	10
Fever	3
Anemia	4
Total	93

It is noteworthy that a number of patients complained of three or four of these various reactions simultaneously. In all of our cases reactions subsided within from one to six days following the withdrawal of the drug and the increase in the fluid intake. No permanent deleterious effects were noted. In all of our cases of maculo-papular dermatitis there was a disagreeable associated pruritus. In one case of the purpura the purpuric areas were exquisitely sensitive and the other insensitive. In one case of febrile reaction seen in consultation, the elevation of temperature reached one hundred four degrees and dropped to normal within eighteen hours after withdrawal of the drug and intravenous infusion. Several instances of fatigue have been profound. In three cases individuals required assistance home from work.

The dosage apparently did not greatly in-

fluence the reaction of the patient, some of our worst reactions having occurred on relatively small dosage of thirty grains daily whereas a number of cases showed no untoward effect from eighty grains daily. With very rare exceptions the patient complaining of reaction suffered identical reaction if the drug was re-instituted and we must agree with Brunsting and others that about ten per cent of cases were intolerant to the drug from some viewpoint. Skin tests were attempted to determine hypersensitivity and met with apparent failure in the experience of several authors^{12,14,22} as well as in that of one of us (J. F. Harrold). It would appear impossible to predict any of the toxic manifestations from this drug as they might obtain on the patient for whom we may wish it employed.

In our experience the female apparently tolerates the drug less well. Further, that this individual idiosyncrasy or sensitivity does apparently bear relation to average dosage. Thirty-nine of our cases reacted on moderate dosage, forty grains daily or less, whereas sixty-seven reacted upon dosage from forty to eighty grains daily.

Anemia to a rather alarming degree requiring transfusion, intravenous fluid, and supportive treatment was seen in one case. However, the response of the hematopoietic system even here appeared to us surprisingly gratifying. Long,¹⁹ in a personal communication, stated that he had observed approximately a dozen cases of hemolytic anemia and two cases of agranulocytosis following the use of sulfanilamide. All recovered although in one of the anemias the hemolysis was so acute that the renal tubules became occluded and a subsequent renal insufficiency developed for a time. Further, he felt that the occasional cases in which severe blood changes developed were unpredictable. While in our modest series no permanent untoward results have presented, nevertheless, certain authors, specifically Frost²¹ and Borst¹ reported deaths from the use of this drug.

In considering the beneficial results of the drug we have been extremely encouraged and have felt that it has become our strongest form of attack against organisms invading the uro-genital tract. Walther²⁵ states, "The final verdict is given not in the laboratory but from the knowledge gained in experience at the bedside."

Pyelitis

The results obtained in its use in pyelitis are as shown in Table II.

TABLE II

Female	44
Male	7
Acute	23
Chronic	28
Complications:	
Hydronephrosis	6
Renal Ptosis	1
Culturally Negative	26
Symptomatic Improvement	21
No Benefit	4

In this group of cases the offending organisms were almost equally divided between staphylococci and members of the colon group with few streptococci infections. The results obtained were apparently equally beneficial in all types of infection except *streptococcus faecalis*. Helmholz¹⁵ in his observations apparently felt that the drug is more efficacious than mandelic acid in all forms of urinary tract infection, both upper and lower, save in the case of the *streptococcus faecalis*. In seventeen of these cases of pyelitis in the female there was a definite associated cicatricial urethritis which was treated concomitantly by urethral dilatations.

Postoperative Infections

Of twenty postoperative cases (renal, bladder, or prostatic) with residual infection to whom the drug was administered, the infection was eradicated in eight, the patient entirely symptomatically relieved in eight, while in four there was no apparent benefit.

Non-specific Prostatitis and Urethritis

Success rewarded our efforts to a far greater extent in these cases of prostatitis which were treated by massage and irrigations in conjunction with sulfanilamide therapy than we had ever before attained. The symptomatic relief was spectacular and the diminution of the white count in the prostatic fluid usually occurred with surprising rapidity. However, Clark⁴ found that when the drug had been discontinued infection not infrequently again became manifest in the prostate.

In those cases noted as symptomatically relieved there was definite improvement microscopically though not completely to normal in the character of the fluid when

last seen. In the cases of urethral stricture all had associated urethral discharge. It is scarcely necessary to state that urethral dilatations were carried out, sulfanilamide being administered in conjunction. The results were uniformly satisfactory.

TABLE III. NON-SPECIFIC LOWER TRACT INFECTIONS IN THE MALE

Prostatitis:	
Clinically Cured	16
Symptomatically Improved	6
No Results	3
Total	25
Urethral Stricture with Urethritis:	
Clinically Cured	5
Symptomatically Relieved	2
Total	7

Gonorrhea

Without doubt sulfanilamide has gained its exalted reputation both among the laity and the physicians of the country because of its reported amazing benefit in the treatment of gonorrhea. Prior to its introduction certainly no drug given by mouth deleteriously affected the growth of this organism to any appreciable degree. The exact method of its bactericidal action is as yet apparently not clearly understood, but, to quote Pittman,²³ "It possesses some peculiar characteristic which enables it to succeed where other methods fail." In view of the fact that previous therapy given either intravenously or by mouth rarely influenced the course of gonorrhoeic infection we must wonder as to how or why this drug should succeed where others have failed. This point may undoubtedly be explained from the fact that R. D. Herrold^{16,17} has demonstrated its presence in the prostatic fluid, in the washings of the urethra, as well as in the urine, which observation has been substantiated by Helmholz¹⁵ and Buchtel⁷ with relation to prostatic fluid.

To us the publication of the paper by Colston and Dees⁸ seemed at least premature and after careful perusal of their article we were unable to discover that they had applied any of the standard criteria of cure in reporting the results of the nineteen cases treated. If provocative efforts were made they were not mentioned so that true eradication of the infection would seem to have remained unproven. In evaluating the series of cases which have come under our observation we should like to mention the

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steps taken in our predication of cure. With the cessation of all clinical and symptomatic manifestations the anterior urethra has been sounded and reaction sought. If unable to obtain reaction the sound has subsequently been passed to the posterior urethra. Again failing reaction, the patient has been given alcohol in the form of beer under direct supervision in our office in order that we may be assured that excess is not ingested and uncontrolled reaction occur. Lastly, instillation of one per cent silver nitrate is made. To date if all of these measures and precautions have been taken and have failed to erupt the gonococcus, we have not encountered what we have felt was a subsequent recurrence of infection. We have chosen Wishengrad's²⁶ interpretation of the time elapsed to accomplish such cure. In other words, the patient may be said to have been cured when the first provocative measure has been negative, providing subsequent provocative measures have not caused exacerbation. With this in mind we present the following series of cases. There were ninety-nine cases of gonorrhea, eighty-five male and fourteen female. The results of treatment were then classified as follows: Cured, fifty-five; symptomatically improved, seventeen; no benefit, seven; lost, six. The duration of infection with and without sulfanilamide may be seen in Table IV.

TABLE IV. FIFTY CASES OF GONORRHEA TREATED PREVIOUS TO SULFANILAMIDE

<i>Duration</i>	<i>Days</i>
Average	104
Shortest	31
Longest	323 plus 5 months
<i>Duration of Infection with Gonorrhea in the Male Treated by Sulfanilamide</i>	
<i>Duration (Acute)</i>	<i>Days</i>
Average	21
Shortest	6
Longest	39
(Chronic)	
Average	45
Shortest	6
Longest	136

It has been impressed upon us in a review of fifty cases of gonorrhea prior to the advent of sulfanilamide that a larger percentage of cases have stayed under medical supervision than previously, undoubtedly due to a very material diminution in the period of treatment necessary. Upon review of our own cases both before and after the introduction of this drug the incidence of lost cases was at least six to one before, and

after its use we find that the percentage of cases cured to our satisfaction and carried through to discharge has increased in approximately the same ratio, which has been in fact both enlightening and encouraging. The average duration of infection in acute gonorrhea was found to be twenty-one days. Turner²⁴ also felt that the majority of his cases were cured in the third week. That of chronic cases was forty-five days. Complications were minimal in both instances and were markedly reduced in frequency. In early cases the incidence of invasion of the posterior urethra was very definitely diminished.

From these observations, namely, the average duration of infection with gonorrhea prior to the use of sulfanilamide and subsequent to its use, one cannot help but reach the conclusion that the drug has been of inestimable assistance from every viewpoint when tolerated. We were further interested in a comparison of the use of the drug with and without supportive treatment and demonstrated to our own complete satisfaction that concomitant therapy further minimizes the duration of the infection and is of material assistance in the eradication of the disease.

Treatment by urethral instillation in our office has been that of acriflavine and gelatin and occasionally self-instillation by the patient of acriflavine 1:4000 or protargol one-quarter of one per cent. A study of Table V will support our contention.

TABLE V. AVERAGE DURATION OF INFECTION IN CASES TREATED WITH SULFANILAMIDE ALONE AND WITH CONCOMITANT THERAPY

Sulfanilamide Only	65 days +
Includes cases lost, duration unknown.	
Sulfanilamide Combined:	
Chronic45 days
Acute21 days

We should like to emphasize that the duration of infection has been determined to the best of our ability by careful provocative procedures and that in many of our patients symptomatic relief has occurred in as short a period as twenty-four hours, very particularly in acute cases when the discharge has entirely disappeared within twenty-four hours never to return. We have not felt, however, that the goal has been attained with the disappearance of the discharge, particularly in view of the fact

that with cessation of the drug all clinical manifestations have only too frequently recurred and in several instances in which the patient felt that cure had been accomplished other members of the family have become infected.

While not exactly pertinent but nevertheless of considerable interest to us, we reviewed such cases as had been under treatment in our hands for previous infection and should like to present illustrative cases.

Lastly, the duration of the disease in the same infection is shown prior to the advent of sulfanilamide and following its administration.

TABLE VI. COMPARATIVE RESULTS IN THE SAME PATIENT IN SEPARATE INFECTIONS

Patient	Without Sulfanilamide	With Sulfanilamide
HB.	31 days	6 days
J.V.	117 days	37 days
B.M.	68 days	14 days
B.K.	210 days	14 days

Cases of Chronic Gonorrhea Prior to and After Administration of Sulfanilamide

Without Sulfanilamide	With Sulfanilamide
1. 136 days	Cured in 15 days
2. 115 days	Cured in 13 days
3. 42 days	Cured in 58 days

The average total dosage used in acute gonorrhea was 450 grains. The average total dosage in chronic gonorrhea with supportive treatment was 820 grains. The average used in chronic gonorrhea without other treatment was 1,445 grains. Thus, by the amount of the drug necessary it would further appear that supportive treatment was definitely beneficial.

Conclusions

1. We have determined to our satisfaction that sulfanilamide is of very material help and assistance in the eradication of the infection of the urinary tract.

2. That more than fifty per cent of patients receiving this drug will experience some degree of reaction which may not be prophesied and that a small group may develop extreme reactions.

3. It has contributed more to the favorable outcome of gonorrhea than any form of treatment previously advocated.

4. Many more patients remain under treatment until cured than formerly.

5. Because of the above fact it is a remarkable advance in the attempt at eradication of gonorrhea.

6. The treatment of gonorrhea is more efficacious with supportive urethral and other standard therapy than without.

Since the presentation of this paper, Oct. 23, 1937, the authors have observed an additional one hundred cases which have served to substantiate conclusions drawn, save that doses of 80 grains daily have been discontinued almost entirely in favor of a maximum dose of 60 grains daily with resulting diminution of reactions.

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Chapman, E. J.	Bay City	Jones, Jerry M.	Bay City	Speckhard, A. O.	Bay City
Criswell, R. H.	Bay City	Kerr, Wm.	Bay City	Stinson, W. S.	Bay City
Dickinson, John W.	Oscoda	Kessler, Mana	Bay City	Swantek, Charles M.	Bay City
Drummond, Fred	Kawkawlin	Kessler, Saba	Bay City	Sweet, Irving	Sterling
Dumond, V. H.	Bay City	Kowals, F. V.	Bay City	Tarter, Clyde S.	Bay City
Ely, Nina	Bay City	LaPorte, L. A.	Gladwin	Thiehoff, E. V.	Gladwin
Foster, L. Fernald	Bay City	Leininger, J. W. (Emeritus)	Gladwin	Tupper, Virgil L.	Bay City
Freel, John A.	Bay City	Levant, Arthur B.	Bay City	Urmston, Paul R.	Bay City
Gamble, Wm. G., Jr.	Bay City	McCarroll, James C.	Bay City	Warren, E. C.	Bay City
Groomes, Charles	Bay City	McDowell, Guy Marshall	Howell	Weed, John	Tawas City
Grosjean, J. C.	Bay City	McEwan, J. H.	Bay City	Westman, R.	Bay City
Gunn, Robert	Standish	Medvesky, M. J.	Bay City	Wilcox, J. W.	Bay City
Gustin, J. W.	Bay City	Miller, Edwin C.	Bay City	Wilson, Thomas G.	Bay City
Hagleshaw, G. L.	Bay City	Miller, Maurice C.	Auburn	Wittwer, E. A.	Bay City
Hasty, Earl	Whittemore	Mitton, O. W.	East Tawas	Ziliak, A. L.	Bay City

Berrien County

Allen, Robert C.	St. Joseph	Harper, Ina	Benton Harbor	Moody, Harold	St. Joseph
Barkman, F. J.	St. Joseph	Harrison, L. L.	Niles	Moore, T. Scott	Niles
Bartlett, W. M.	Benton Harbor	Helkie, Wm. L.	Three Oaks	Reagan, Robert E.	Benton Harbor
Bliesner, A. F.	St. Joseph	Hershey, Noel J.	Niles	Richmond, D. M.	St. Joseph
Brown, F. W.	Watervliet	Higbee, Frank O.	Three Oaks	Robson, Verna	Berrien Springs
Cawthorne, H. J.	Benton Harbor	Herring, Nathaniel A.	Niles	Silverstein, Joseph S.	Benton Harbor
Colef, Irving	Benton Harbor	Ingleright, Leon R.	Niles	Smith, W. A.	Berrien Springs
Conybeare, R. C.	Benton Harbor	King, Frank, Jr.	Benton Harbor	Sowers, B. F.	Benton Harbor
Dunnington, R. N.	Benton Harbor	King, Frank A., Sr.	Benton Harbor	Strayer, J. C.	Buchanan
Eidson, Hazel	Berrien Springs	Kling, H. C.	Niles	Taber, R. B.	Benton Harbor
Ellet, W. C.	Benton Harbor	Kok, Harry	Benton Harbor	Vary, Edwin P.	Niles
Emery, Clayton	St. Joseph	Kotler, M. J.	Coloma	Weil, Leonard	Benton Harbor
Frederickson, H. C.	Buchanan	Lapin, Morley	Benton Harbor	Westervelt, H. O.	Benton Harbor
Friedman, Morris	New Buffalo	McDermott, J. J.	St. Joseph	Witt, Edw. J. (Retired)	Los Angeles, Calif.
Gillette, Clarence H.	Niles	Merritt, Charles W.	St. Joseph	Yeomans, T. G.	St. Joseph
Gunn, J. W.	Watervliet	Miller, E. A.	Berrien Springs		
Hanna, P. G.	St. Joseph	Mitchell, Carl A.	Benton Harbor		

Branch County

Aldrich, Napier S.	Coldwater	Gist, L. I.	Coldwater	Phillips, F. L.	Bronson
Beck, Perry C.	Bronson	Holbrook, A. G.	Coldwater	Schultz, Samuel	Coldwater
Bien, W. J.	Coldwater	Leeder, F. S.	Coldwater	Scovill, H. A.	Union City
Brunson, A. E.	Colon	McLain, R. W.	Jackson	Thomas, J. A.	Coldwater
Culver, Bert W.	Coldwater	Meier, H. J.	Coldwater	Wade, R. L.	Coldwater
Danley, W. E.	Union City	Mooi, H. R.	Coldwater	Weidner, H. R.	Coldwater
Far, S. E.	Quincy				

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Calhoun County

Allen, Herbert R.	Battle Creek	Haughey, Wm. H. (Honorary)	Battle Creek	Moshier, Bertha	Battle Creek
Amos, Norman H.	Battle Creek	Heald, C. W.	Battle Creek	Mustard, Russell	Battle Creek
Baribeau, R. H.	Battle Creek	Henderson, Louis M.	Albion	Nelson, Albert W.	Battle Creek
Barnhart, Samuel E.	Battle Creek	Henderson, Phillip	Albion	Olsen, A. B.	Battle Creek
Becker, H. F.	Battle Creek	Herzer, Henry A.	Albion	Overholt, B. M.	Battle Creek
Beuker, Herman	Marshall	Hills, C. R.	Battle Creek	Patterson, A.	Battle Creek
Black, Paul A. L.	Wilmington, N. C.	Holes, Jesse J.	Battle Creek	Pritchard, J. Stuart	Battle Creek
Bonifer, Philip	Battle Creek	Holtom, B. G.	Battle Creek	Putman, W. N.	Battle Creek
Brainard, C. W.	Battle Creek	Howard, W. L.	Battle Creek	Radabaugh, Clara V.	Battle Creek
Byland, N. O.	Battle Creek	Hoyt, Aura A.	Battle Creek	Riley, Wm. H.	Battle Creek
Campbell, Alice	Albion	Humphrey, Archie E.	Marshall	Robbert, John	Climax
Campbell, R. J.	Battle Creek	Humphrey, Arthur A.	Battle Creek	Rorick, Wilma W.	Battle Creek
Capron, Manley J.	Battle Creek	Jesperson, Lydia	Battle Creek	Rosenfeld, Jos. E.	Battle Creek
Church, Starr K.	Marshall	Johnson, O. J.	Marshall	Roth, Paul	Battle Creek
Chynoweth, W. R.	Battle Creek	Jones, T. K.	Marshall	Royer, C. W.	Battle Creek
Cooper, J. E.	Battle Creek	Keagle, Leland R.	Battle Creek	Royer, W. A.	Battle Creek
Curry, Robert K.	Homer	Keeler, K. B.	Albion	Selmon, Bertha L.	Battle Creek
Derickson, E. C.	Burlington	Kellogg, Carrie S.	Battle Creek	Sharp, A. D.	Albion
Dickson, A. R.	Battle Creek	Kellogg, John H.	Battle Creek	Shipp, L. P.	Battle Creek
Dodge, Warren M., Jr.	Battle Creek	Kingsley, Paul C.	Battle Creek	Simpson, R. S.	Battle Creek
Dugan, Wm. M.	Battle Creek	Kinde, M. R.	Battle Creek	Slagle, Geo. W.	Battle Creek
Fahndrich, C. G.	Battle Creek	Kinzel, R. W.	Battle Creek	Sleight, James D.	Battle Creek
Finch, D. L.	Augusta	Kolvoord, Theodore	Battle Creek	Sleight, Raymond D.	Battle Creek
Fopeano, John V.	Battle Creek	LaFrance, Francis	Battle Creek	Smith, T. C.	Athens
Fraser, R. H.	Battle Creek	Landon, Charles C.	Battle Creek	Stadle, Wendell H.	Battle Creek
Funk, L. D.	Athens	Lanman, Everett L.	Battle Creek	Stewart, Charles E.	Battle Creek
Gething, Joseph V.	Battle Creek	Lewis, W. B.	Battle Creek	Stiebel, Richard A.	Battle Creek
Giddings, A. M.	Battle Creek	Lowe, H. M.	Battle Creek	Tannenholz, Harold S.	Battle Creek
Gilfillan, Margery J.	Battle Creek	Lowe, Kenneth	Battle Creek	Taylor, Clifford B.	Albion
Godfrey, W. L. (Honorary)	Battle Creek	Lowe, Stanley T.	Battle Creek	Upson, W. O.	Battle Creek
Gordon, J. K. M.	Battle Creek	MacGregor, Archibald	Battle Creek	Van Camp, Elijah	Battle Creek
Gorsline, Clarence S.	Battle Creek	Martin, Walter F.	Battle Creek	Vander Voort, W. V.	Battle Creek
Hafford, A. T.	Albion	McNair, Lawrence	Albion	Verity, Lloyd E.	Battle Creek
Hafford, George C.	Albion	Melges, F. J.	Battle Creek	Vollmer, Maud J.	Moline, Ill.
Hansen, E. L.	Battle Creek	Mercer, C. M.	Battle Creek	Walters, F. R.	Battle Creek
Harris, Rowland H.	Battle Creek	Morrison, Donald B.	Tekonsha	Wencke, Carl G.	Battle Creek
Haughey, Wilfrid	Battle Creek	Mortensen, Martin A.	Calif.	Whyte, Bruce	Battle Creek
			Santa Clara, Calif.	Winslow, R. C.	Battle Creek

Cass County

Adams, U. M.	Marcellus	Hickman, John	Dowagiac	Lyman, W. R.	Dowagiac
Bryant, S. E.	Dowagiac	Jones, John H.	Dowagiac	Myers, Charles M.	Dowagiac
Clary, R. I.	Dowagiac	Kelsey, James H.	Cassopolis	Newsome, Otis	Cassopolis
Cunningham, E. M.	Cassopolis	Loupee, George	Dowagiac	Pierce, Kenneth C.	Dowagiac
Harmon, C. M.	Cassopolis	Loupee, S. L.	Dowagiac	Zwergel, E. H.	Cassopolis

Chippewa-Mackinac Counties

Ennis, C. J. (Honorary)	Sault Ste. Marie	Gilfillan, E. O.	Sault Ste. Marie	Montgomery, B. T.	St. Ignace
Bandy, F. C.	Sault Ste. Marie	Husband, F. H.	Sault Ste. Marie	Reese, J. A.	DeTour
Birch, Wm.	Sault Ste. Marie	Littlejohn, David	Sault Ste. Marie	Scott, Dwight F.	Sault Ste. Marie
Blain, James G.	Sault Ste. Marie	McBryde, Lyman M.	Sault Ste. Marie	Vegors, S. H.	Sault Ste. Marie
Conrad, George A.	Sault Ste. Marie	Mertaugh, W. F.	Sault Ste. Marie	Wallen, LeRoy J.	Sault Ste. Marie
Cornell, Eliphilet A. (Honorary)	Sault Ste. Marie	Moloney, F. J.	Sault Ste. Marie	Webster, E. H.	Sault Ste. Marie
Darby, J. F.	St. Ignace			Willison, C.	Sault Ste. Marie
Edmison, W. C.	St. Ignace			Yale, I. V.	Sault Ste. Marie

Clinton County

Ho, Thomas Y.	St. Johns	Ho, Thomas Y.	St. Johns	McWilliams, W. B.	Maple Rapids
Frace, Guy H.	St. Johns	Luton, F. E.	St. Johns	Richards, F. D.	De Witt
Hart, Dean W.	St. Johns	MacPherson, D. H.	Fowler	Russell, Sherwood R.	St. Johns
Henthorn, A. C.	St. Johns				

Delta County

Diamond, J. A.	Gladstone	Diamond, J. A.	Gladstone	Long, Harry W.	Escanaba
Bachus, Arthur	Bark River	Frenn, Nathan J.	Bark River	Miller, Albert H.	Gladstone
Bartley, George C.	Escanaba	Groos, Harold Q.	Escanaba	Mitchell, James D.	Gladstone
Benson, G. W.	Escanaba	Groos, Louis P.	Escanaba	Moll, G. W.	Escanaba
Boyce, D. H.	Escanaba	Hult, Otto S.	Gladstone	Treiber, Louis P.	Escanaba
Carlton, A. J.	Escanaba	Kitchen, A. S.	Escanaba	Walsh, J. J.	Escanaba
Chenoweth, Nancy R.	Escanaba	Lanting, R.	Escanaba	Witters, Josef E.	Nahma
Defnet, Harry J.	Escanaba	Lemire, Wm. A.	Escanaba		
Diamond, F. J.	Gladstone				

Dickinson-Iron Counties

Fiedling, Wm.	Norway	Fiedling, Wm.	Norway	Larson, H. J.	Crystal Falls
Frederickson, G. A.	Iron Mountain	Frederickson, G. A.	Iron Mountain	Levine, D. A.	Iron River
Anderson, E. B.	Iron Mountain	Haight, H. H.	Crystal Falls	Libby, Edward M.	Iron River
Baron, B. C.	Crystal Falls	Hamlin, Lloyd E.	Norway	Menzies, Clifford	Iron Mountain
Boyce, George H.	Iron Mountain	Hayes, R. E.	Sagola	Merritt, C. E.	Iron Mountain
Browning, James L.	Iron Mountain	Huron, W. H.	Iron Mountain	Smith, Donald R.	Iron Mountain
Camper, T. E.	Stambaugh	Irvine, L. E.	Iron River	Walker, Claude W.	Iron Mountain
Cowell, Joseph A.	Iron Mountain	Kofmehl, Wm. J.	Stambaugh	White, Robert E.	Stambaugh
De Salvo, F.	Niagara, Wis.				

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Eaton County

Anderson, K. A.	Charlotte	Sackett, C. S.	Charlotte
Arner, Fred L.	Bellevue	Sassaman, F. W.	Charlotte
Bradley, James B.	Eaton Rapids	Sevener, C. J.	Charlotte
Brown, B. Phillip	Charlotte	Sevener, Lester G.	Charlotte
Burdick, Austin F.	Grand Ledge	Sheets, A. G.	Eaton Rapids
Burleson, A. H. (Honorary)	Olivet	Stanka, Andrew G.	Grand Ledge
Engle, Paul	Olivet	Stimson, C. A.	Eaton Rapids
Gibson, T. E.	Charlotte	Van Ark, Bert	Eaton Rapids
Hargrave, Don V.	Eaton Rapids	Wilensky, Thomas	Eaton Rapids
Huber, Charles D.	Charlotte		

Genesee County

Backus, G. R.	Flint	Odle, Ira	Flint
Bahlman, Gordon H.	Flint	Orr, J. Walter	Flint
Baird, James	Flint	Paul A. T.	Flint
Bald, Fred W.	Flint	Pfeiffer, A. C.	Mt. Morris
Baske, Franklin W.	Flint	Phillips, R. L.	Flint
Bateman, L. G.	Flint	Pratz, O. C.	Flint
Benson, J. C.	Flint	Preston, Otto	Flint
Biggar, H. R.	Flint	Randall, H. E.	Flint
Bishop, D. L.	Flint	Reeder, Frank E.	Flint
Blakeley, A. C.	Flint	Reid, Wells C.	Goodrich
Bogart, Leon M.	Flint	Richeson, V.	Flint
Boles, Wm. P.	Flint	Roberts, Floyd A.	Flint
Bonathan, A. T.	Flint	Rowley, James A.	Flint
Bradley, Robert	Flint	Rundles, Walter Z.	Flint
Brain, R. Gordon	Flint	Scavarda, Charles J.	Flint
Brasie, D. R.	Flint	Scott, R. D.	Flint
Briggs, Guy D.	Flint	Shantz, L. O.	Flint
Burnell, B. E.	Flint	Sleeman, Blythe	Linden
Burnell, Max.	Flint	Smith, E. C.	Flint
Chambers, Myrton S.	Flint	Sniderman, Benjamin	Flint
Charters, John H.	Flushing	Sorkin, S. S.	Flint
Childs, Lloyd H.	Flint	Steinman, F. H.	Flint
Clark, Clifford P.	Flint	Stephenson, Robert A.	Flint
Colwell, C. W.	Flint	Stevenson, W. W.	Flint
Connell, J. T.	Flint	Stroup, C. K.	Flint
Conover, G. V.	Flint	Sutherland, James K.	Flint
Conover, T. S.	Flint	Sutton, M. R.	Flint
Cook, Henry	Flint	Thompson, Alvin	Flint
Covert, F. L.	Gaines	Walden, C. E.	Flint
Credille, B. A.	Flint	Wall, W. J.	Davison
Edgerton, A. C.	Clio	Wallace, Wm. S.	Flint
Finkelstein, T.	Flint	Wark, D. R.	Flint
Flynn, S. T.	Flint	Wheelock, A. S.	Flint
Foley, S. I.	Flint	White, C. H.	Fenton
Fuller, H. T.	Mt. Morris	White, Herbert	Flint
Gelenger, S. M.	Flint	Williams, W. S.	Flint
		Willoughby, G. L.	Flint
		Willoughby, L. L.	Flint
		Wills, T. N.	Flint
		Wright, D. R.	Flint
		Wright, G. R.	Monrose
		Wyman, J. S.	Davison

Gogebic County

Anderson, Charles E.	Bessemer	Reynolds, F. L. S.	Ironwood
Byrd, Wallace	Watersmeet	Sarvela, H. L.	Ironwood
Conley, W. C.	Ironwood	Stevens, Charles E.	Bessemer
Crosby, Theodore S.	Ironwood	Tew, Wm. Ellwood	Bessemer
Eisele, D. C.	Ironwood	Tressel, H. A.	Wakefield
Gertz, M. A.	Ironwood	Urquhart, C. C.	Ironwood
Gorrilla, A. C.	Ironwood	Wacek, W. H.	Ironwood
Lieberthal, M. J.	Ironwood	Winter, Joseph A.	Ironwood
Lieberthal, Paul	Ironwood		

Grand Traverse-Leelanau-Benzie Counties

Brownson, J. J.	Kingsley	Lemen, Charles E.	Traverse City
Bushong, B. B.	Traverse City	Lossman, R. T.	Traverse City
Covey, E. L.	Honor	Murphy, Fred E.	Cedar
Ellis, Claude I.	Suttons Bay	Nickels, M. M.	Traverse City
Flood, Robert E.	Northport	Osterlin, Mark	Traverse City
Gauntlett, J. W.	Traverse City	Porter, Clark	Traverse City
Holliday, George A.	Traverse City	Quinn, Henry M.	Copemish
Huston, Russell R.	Elk Rapids	Rennell, E. J.	Traverse City
Jones, Stewart R.	Suttons Bay	Sheets, R. Philip	Traverse City
Kitson, V. H.	Elk Rapids	Sladek, E. F.	Traverse City
Kyselka, H. B.	Traverse City		

Gratiot-Isabella-Clare Counties

Aldrich, Alfred L.	Ithaca	Faber, Michael	Ashley
Barstow, D. K.	St. Louis	Graham, B. J.	Alma
Barstow, W. E.	St. Louis	Graham, F. J.	Alma
Baskerville, C. M.	Mt. Pleasant	Hall, B. C.	Pompeii
Becker, M. G.	Edmore	Hammerberg, Kuno	Clare
Budge, M. J.	Ithaca	Harrigan, W. L.	Mt. Pleasant
Burch, L. J.	Mt. Pleasant	Hersch, Wm. E.	Mt. Pleasant
Burt, C. E.	Ithaca	Hobbs, A. D.	St. Louis
Carney, T. J.	Alma	Howell, Don M.	Alma
Davis, L. L.	Mt. Pleasant	Hubbard, M. C.	Vestaburg
Dawson, R. E.	Blanchard	Johnson, P. R.	Mt. Pleasant
Drake, Wilkie M.	Breckenridge	Kilborn, H. F.	Ithaca
DuBois, C. F.	Alma		

Lamb, E. T.	Alma
McArthur, Stewart C.	Mt. Pleasant
Reeder, J. A.	Clare
Rondot, E. F.	Lake
Sanford, B. J.	Clare
Sarven, J. D.	Middleton
Slattery, F. G.	Clare
Strange, Russell H.	Mt. Pleasant
Waggoner, R. L.	St. Louis
Wilcox, R. A.	Alma
Wilson, Earl C.	Harrison
Wolfe, Kenneth P.	Alma
Wood, Cornelius B.	Clare

JOUR. M.S.M.S.

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Hillsdale County

Alger, W. E.	Pittsford	Green, B. F.	Hillsdale	Martindale, E. A.	Hillsdale
Bates, James A.	Camden	Hamilton, A. J.	Hillsdale	McFarland, O. G.	North Adams
Bower, Charles T.	Hillsdale	Hanke, George R.	Ransom	McGavran, E. G.	Hillsdale
Bowers, M. H.	Hillsdale	Heald, J. E.	Hillsdale	Miller, Harry C.	Hillsdale
Clobridge, G. E.	Allen	Hodge, C. L.	Reading	Poppen, C. J.	Reading
Day, Luther W.	Jonesville	Hughes, Henry F.	Hillsdale	Sterling, John S.	Jerome
Ditmars, William H.	Jonesville	Johnson, James H.	Hillsdale	Strom, A. W.	Hillsdale
Fisk, F. B.	Jonesville	Kline, Fred	Litchfield	Yeagley, J. L.	Waldron
		Mattson, H. F.	Hillsdale		

Houghton-Baraga-Keweenaw Counties

Abrams, James C.	Calumet	King, William T.	Ahmeek	Scott, Wm. P. (Emeritus)	Houghton
Aldrich, A. B.	Houghton	Kirton, Joseph R. W.	Calumet	Sloan, P. S.	Trimountain
Aldrich, Addison D.	Houghton	LaBine, Alfred	Houghton	Stern, Isadore D.	Houghton
Bourland, Philip D.	Calumet	Levin, Simon	Houghton	Stewart, G. C.	Hancock
Brewington, Geo. F.	Mohawk	Leo, L. S.	Houghton	Stewart, J. C. B.	Painesdale
Buckland, R. S.	Baraga	Maas, R. J. (Emeritus)	Houghton	Stewart, Marshall	Houghton
Burke, John	Hubbell	MacQueen, Donald K.	Laurium	Tinetti, Ernest F.	Laurium
Coffin, Leslie E.	Painesdale	Manthei, W. A.	Lake Linden	Van Slyke, Wm. H.	Hancock
Cooper, C. A.	Hancock	Marshall, Frank F.	L'Anse	Waldie, Geo. Mc. L.	Hancock
Gregg, W. T. S.	Calumet	Quick, James B.	Laurium	Ware, H. M.	Ahmeek
Hilmer, R. E.	Beacon Hill	Roberts, Melvin D.	Hancock	Wickliffe, T. P.	Calumet
Janis, A. J.	Hancock	Roche, A. C.	Calumet	Winkler, Henry J.	L'Anse
Kadin, Maurice	Calumet	Rupprecht, C. H.	Calumet		

Huron-Sanilac Counties

Blanchard, E. W.	Deckerville	Herrington, Charles I.	Bad Axe	Norgaard, Hal V.	Marlette
Caccamise, Jos. G.	Sebewaing	Herrington, Willet J.	Bad Axe	Oakes, C. W.	Harbor Beach
Cochran, Lewis E.	Peck	Holdship, William B.	Ugly	Robertson, Collin G.	Sandusky
Gettel, Roy R.	Kinde	Kirker, F. O.	Sandusky	Scheurer, C.	Pigeon
Gaston, Lloyd	Sandusky	Koch, D.	Brown City	Thummie, Harrison F.	Sebewaing
Gift, W. A.	Marlette	Learmont, H. H.	Croswell	Tweedie, G. Evans	Sandusky
Hart, R. K.	Croswell	Lunn, J. O.	Harbor Beach	Tweedie, S. Martin	Sandusky
Henderson, J. Bates	Pigeon	Monroe, Duncan J.	Elkton	Webster, John C.	Marlette
		Morden, Charles B.	Bad Axe		

Ingham County

Albers, J. S.	East Lansing	Hall, R. E.	Dansville	O'Sullivan, Gertrude	Mason
Barnum, S. V.	Lansing	Hart, L. C.	Lansing	Owen, A. E.	Lansing
Barrett, C. D.	Mason	Haynes, H. B.	Lansing	Peacock, T. L.	Lansing
Bartholomew, Henry S.	Lansing	Haze, Harry A.	Lansing	Phillips, R. H.	Lansing
Bauer, Theodore I.	Lansing	Heckert, Frank	Lansing	Pinkham, R. A.	Lansing
Behen, William C.	Lansing	Heckert, J. K.	Lansing	Ponton, J.	Mason
Bellinger, E. G.	Lansing	Hendren, Owen	Williamston	Prall, H. J.	Lansing
Bolin, R. S.	Mason	Henry, L.	Lansing	Randall, O. M.	Lansing
Bradford, C. W.	Lansing	Hermes, Ed. J.	Lansing	Roberts, D. W.	Lansing
Breakey, Robert S.	Lansing	Himmelberger, R. J.	Lansing	Robson, Edmund J.	Lansing
Brubaker, Earl	Lansing	Hodges, Kenneth P.	Lansing	Rockwell, H. C.	Lansing
Brucker, Karl B.	Lansing	Huggett, Clare C.	Lansing	Rozan, J. S.	Lansing
Bruegel, Oscar H.	East Lansing	Huntley, Fred M.	Lansing	Rozan, M. M.	Lansing
Burhans, Robert	Lansing	Hurth, M. S.	Lansing	Russell, Claude V.	Lansing
Cameron, W. J.	Lansing	Johnson, K. H.	Lansing	Sander, John F.	Lansing
Campbell, A. M.	Lansing	Jones, Francis A.	Lansing	Sanford, Thomas M.	Lansing
Carr, Earl I.	Lansing	Kalmbach, R. E.	Lansing	Seger, Fred L.	Lansing
Christian, L. G.	Lansing	Keim, C. D.	Lansing	Shaw, Milton	Lansing
Cook, R. J.	Lansing	Kent, Edith Hall	Lansing	Slemons, C. C.	Grand Rapids
Corsaut, J. C.	Mason	Kent, Herbert K.	Lansing	Smith, H. M.	Lansing
Culver, C. F.	Howell	Krafts, L. C.	Lansing	Smith, Lillian R.	Lansing
Cushman, F. J.	Lansing	Larabee, E. E.	Williamston	Snell, Dana M.	Lansing
Darling, L. H.	Lansing	Loree, Maurice C.	Lansing	Snyder, LeMoynne	Lansing
Davenport, C. S.	Lansing	Lucas, T. A.	Lansing	Spencer, Perry	Lansing
DeVries, C. F.	Lansing	Ludlum, L. C.	Lansing	Steiner, A. A.	Lansing
Doyle, Charles R.	Lansing	McConnell, E. G.	Lansing	Stiles, Frank	Lansing
Doyle, C. P.	Lansing	McCorvie, C. Ray	East Lansing	Strauss, P. C.	Lansing
Drolett, Fred J.	Lansing	McCoy, Earl M.	Grand Ledge	Stucky, George C.	Lansing
Drolett, Lawrence	Lansing	McCrum, R. R.	Lansing	Toothaker, Kenneth	Lansing
Dunn, F. C.	Lansing	McGillicuddy, Oliver B.	Lansing	Towne, Lawrence C.	Lansing
Dunn, F. M.	Lansing	McGillicuddy, R. J.	Lansing	Trost, F. L.	Holt
Ellis, Bertha	Lansing	McIntyre, J. E.	Lansing	Vander Slice, E. R.	Lansing
Ellis, C. W.	Lansing	McNamara, Wm. E.	Lansing	Vander Zalm, T. P.	Lansing
Finch, Russell L.	Lansing	McPherson, E. G.	Stockbridge	Wadley, Ralph	Lansing
Fisher, D. W.	Lansing	Mercer, Walter E.	Weberville	Warford, J. T.	Lansing
Fosget, Wilbur W.	Lansing	Meyer, H. R.	Lansing	Webb, Roy O.	Okemos
Foust, E. H.	Lansing	Miller, H. A.	Lansing	Weinburgh, H. B.	Lansing
Freeland, O. H.	Mason	Miller, Robert E. (Honorary)	Lansing	Welch, William	Lansing
French, Horace L.	Lansing	Mitchell, A. B.	Lansing	Wetzel, John O.	Lansing
Galbraith, Dugald A.	Lansing	Morrow, R.	Lansing	Wight, W. G.	Lansing
Gardner, C. B.	Lansing	Niles, B. D.	Lansing	Wiley, Harold W.	Lansing
Goldner, R. E.	Lansing	Ochsner, P. J.	Lansing	Wellman, John M.	Lansing
Gudakunst, Don W.	Lansing	Olin, Richard M.	East Lansing	Willson, Howard S.	Lansing
Gunderson, G. O.	Lansing	Osborn, Samuel	Lansing	Wilson, Harry A.	Lansing
Guy, Spender D.	Lansing				

Ionia-Montcalm Counties

Bird, William L.	Greenville	Hargrave, F. A. (Emeritus)	Palo	Marsh, F. M.	Ionia
Bower, A. J.	Greenville	Haskell, Robert H.	Northville	Marston, L. L.	Lakeview
Braley, Frank	Saranac	Hay, John R.	Saranac	Maynard, Herbert M.	Ionia
Bracey, L. E.	Sheridan	Hoffs, M. A.	Lake Odessa	McCann, John J.	Ionia
Dunkin, Lloyd S.	Greenville	Hollard, A. E.	Belding	Norris, William W.	Portland
Duval, L. E.	Ionia	Imus, H. L.	Ionia	Peabody, C. H.	Lake Odessa
Ferguson, F. H.	Carson City	Johns, Joseph J.	Ionia	Pankhurst, C. T.	Ionia
Fleming, J. C.	Pewamo	Kelsey, L. E.	Lakeview	Pinkham, J. F.	Belding
Fox, Harold M.	Portland	Kling, V. F.	Ionia	Robertson, P. C.	Ionia
Fuller, Rudolphus W.	Crystal	Laughlin, A. I.	Clarksville	Swift, E. R.	Lakeview
Geib, O. P.	Carson City	La Victoire, I. N.	Ionia	Van Loo, J. A.	Belding
Hansen, M. M.	Greenville	Lilly, I. S.	Stanton	Whitten, R. R.	Ionia
		Lintner, Roy C.	Ionia		

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Jackson County

Ahronheim, J. H.	Jackson	Hicks, Glenn C.	Jackson	Roberts, Arthur J. (Emeritus)	Jackson
Alter, R. H.	Jackson	Hoernschemeyer, J. L.	Jackson	Schepeler, Cortland W.	Brooklyn
Anderson, W. B.	Jackson	Hungerford, P. R.	Concord	Scheurer, P. A.	Manchester
Baker, G. M.	Parma	Huntley, W. B.	Jackson	Schmidt, T. E.	Jackson
Balconi, Henry	Brooklyn	Hurley, H. L.	Jackson	Scott, John A.	Jackson
Bartholic, F. W.	Grass Lake	Keefer, A. H.	Concord	Seybold, G. A.	Jackson
Brown, H. A.	Jackson	Kudner, Don F.	Jackson	Shaeffer, A. M.	Jackson
Bullen, G. R.	Jackson	Kugler, J. C. (Emeritus)	Jackson	Smith, Dean W.	Jackson
Chabut, H.	Jackson	Lake, Wm. H.	Jackson	Smith, John C.	Jackson
Clarke, C. S.	Jackson	Lathrop, Wm. W.	Jackson	Snow, W. R.	Jackson
Cochrane, Wayne A.	Jackson	Leahy, E. O.	Jackson	Speck, John W.	Jackson
Cooley, Randall M.	Jackson	Leonard, Clyde A.	Jackson	Spicer, W. E.	Jackson
Corley, C.	Jackson	Lewis, E. F.	Jackson	Stewart, L. L.	Jackson
Corley, Ennis	Jackson	Ludwick, J. E.	Jackson	Stewart, Maitland N.	Jackson
Cox, Ferdinand	Jackson	McGarvey, W. E.	Jackson	Stocking, Bruce W.	Jackson
Crowley, Edw. D.	Jackson	McLaughlin, M. J.	Jackson	Stockind, M. V.	Jackson
Culver, Guy D.	Stockbridge	Meads, J. B.	Jackson	Tate, Cecil E.	Jackson
DeMay, C. E.	Jackson	Munro, C. D.	Jackson	Thalner, L. F.	Jackson
Dengler, C. R.	Jackson	Munro, James E.	Jackson	Thayer, E. A.	Jackson
Edmonds, J. M.	Horton	Murphy, B. M.	Jackson	Townsend, J. W.	Vandercook Lake
Enders, W. H.	Jackson	Newton, R. E.	Jackson	Tuthill, F. S.	Concord
Finton, Walter L.	Jackson	O'Meara, James J.	Jackson	Van Schoick, J. D.	Hanover
Finton, W. R.	Jackson	Otis, G. R.	Jackson	Van Schoick, Frank	Jackson
Foust, W. L.	Grass Lake	Page, John W.	Jackson	Wertenberger, M. D.	Jackson
Gibson, F. J.	Jackson	Peterson, E. S.	Jackson	Wholian, John W.	Michigan Center
Glover, H. G.	Jackson	Philips, David P.	Jackson	Wickham, W. A.	Jackson
Greenbaum, Harry	Jackson	Porter, H. W.	Jackson	Wilson, E. D.	Jackson
Hackett, T. E.	Jackson	Pray, Frank F.	Jackson	Wilson, E. G.	Jackson
Hanft, Cyril F.	Springport	Pray, George R.	Jackson	Wilson, N. D.	Jackson
Hanna, R. J.	Jackson	Quillen, R. D.	Chelsea	Winter, G. E.	Jackson
Hardie, G. C.	Jackson	Ransom, F. G.	Jackson	Woyt, S. W.	Jackson
Harris, Lester J.	Jackson	Riley, Philip A.	Jackson		

Kalamazoo-Van Buren Counties

Aach, Hugo	Kalamazoo	Gilding, Z. L.	Vicksburg	Pratt, F. A.	Kalamazoo
Adams, R. U.	Kalamazoo	Grant, Frederick E.	Kalamazoo	Prentice, Hazel R.	Kalamazoo
Alexander, C. A.	Kalamazoo	Greenman, Newton H.	Decatur	Pullon, A. R.	Kalamazoo
Ames, Edward (Emeritus)	Kalamazoo	Gregg, Sherman	Kalamazoo	Rickert, John A.	Allegan
Andrews, F. T.	Kalamazoo	Harter, Randolph S.	Schoolcraft	Rigerink, H. A.	Kalamazoo
Andrews, Sherman	Kalamazoo	Heersma, H. S.	Kalamazoo	Riley, G. M.	Gobles
Armstrong, R. J.	Kalamazoo	Hildreth, R. C.	Kalamazoo	Rockwell, A. H. (Emeritus)	Kalamazoo
Balch, R. E.	Kalamazoo	Hobbs, E. J.	Galesburg	Rockwell, Donald C.	Kalamazoo
Banner, Lawrence R.	Kalamazoo	Hodgman, Albert	Kalamazoo	Sage, E. D.	Kalamazoo
Barnebee, J. Hosea	Kalamazoo	Hoebke, Wm. G.	Kalamazoo	Scholten, D. J.	Kalamazoo
Barnebee, J. W.	Kalamazoo	Howard, W. H.	Galesburg	Scholten, Wm.	Kalamazoo
Barrett, F. Elizabeth	Kalamazoo	Hubbell, R. J.	Kalamazoo	Schrier, C. M.	Kalamazoo
Bennett, Charles L.	Kalamazoo	Huyser, Wm. C.	Kalamazoo	Schrier, Paul	Kalamazoo
Bennett, Keith	Kalamazoo	Ilgenfritz, F. M.	Kalamazoo	Schrier, Thomas	Comstock
Berry, J. F.	Kalamazoo	Irwin, Wm. D.	Kalamazoo	Scott, Wm. A.	Kalamazoo
Bodmer, H. C.	Kalamazoo	Itzen, J. F.	South Haven	Sears, H. A.	Kalamazoo
Bope, Wm. P.	Decatur	Jackson, John B.	Kalamazoo	Shackleton, Wm. E.	Kalamazoo
Borgman, Wallace	Kalamazoo	Jennings, W. O.	Kalamazoo	Shepard, Benjamin A.	Kalamazoo
Boothby, F. M.	Lawrence	Kenzie, W. N.	Camp Custer	Shook, R. W.	Kalamazoo
Boys, C. E.	Kalamazoo	Kingma, J. G.	Decatur	Snyder, Roscoe F.	Kalamazoo
Boys, Floyd	Kalamazoo	Klerk, W. J.	Kalamazoo	Sussworth, M. N.	Schoolcraft
Braden, G. M. (Emeritus)	Scotts	Koestner, P. A.	Kalamazoo	Spalding, R. W.	Gobles
Brown, I. W.	Kalamazoo	Lambert, R. H.	Kalamazoo	Squires, David E.	Kalamazoo
Burns, J. T.	Kalamazoo	Lang, W. W.	Kalamazoo	Stewart, L. H.	Kalamazoo
Caldwell, George H.	Kalamazoo	Lavender, Howard	Kalamazoo	Ten Houten, Chas.	Paw Paw
Cobb, Horace R.	Kalamazoo	Light, Richard U.	Kalamazoo	Terwilliger, Edwin	South Haven
Collins, Ward E.	Kalamazoo	Light, S. Rudolph	Kalamazoo	Unrath, Clara	Kalamazoo
Cook, R. G.	Kalamazoo	Littig, John	Kalamazoo	Upjohn, E. Gifford	Kalamazoo
Crawford, Kenneth	Kalamazoo	Lowe, Edwin G.	Bangor	Upjohn, L. N.	Kalamazoo
Crum, Leo J.	Kalamazoo	MacGregor, J. R.	Kalamazoo	Van Ness, J. Howard	Allegan
Dean, Ray	Three Rivers	Malone, James G.	Kalamazoo	Van Urk, Thomas	Kalamazoo
Den Bleyker, Walter	Kalamazoo	Maxwell, J. C.	Paw Paw	Volderauer, John	Kalamazoo
DeWitt, L. H.	Kalamazoo	McCarthy, J. S.	Kalamazoo	Wagar, Carl	Schoolcraft
Diephus, Bert	South Haven	McIntyre, C. H.	Kalamazoo	Walker, Burt D.	Kalamazoo
Dowd, B. J.	Kalamazoo	McNabb, A. A.	Lawrence	Weirich, Richard	Marcellus
Doyle, F. M.	Kalamazoo	McNair, Rush	Kalamazoo	West, A. E.	Kalamazoo
Ertell, Wm. Francis	Kalamazoo	Morter, Roy A.	Kalamazoo	Westcott, L. E.	Kalamazoo
Fast, R. B.	Kalamazoo	Murphy, Norman D.	Bangor	Wilbur, E. P.	Kalamazoo
Fulkerson, C. B.	Kalamazoo	Nibbelink, Benjamin	Kalamazoo	Wilkinson, Chester A.	Kendall
Fuller, P. M.	Kalamazoo	Osborne, Charles E.	Vicksburg	Williams, F. N.	Hartford
Fuller, R. T.	Kalamazoo	Patmos, Martin	Kalamazoo	Youngs, A. S.	Kalamazoo
Garrett, Evan	Hartford	Peele, J. W.	Kalamazoo	Youngs, C. A.	Kalamazoo
Gerstner, Louis W.	Kalamazoo	Peele, Matthew	Kalamazoo	Young, Wm. R.	Lawton
Giffen, John R.	Bangor	Penoyer, C. L.	South Haven		
Gilding, Joseph	Vicksburg	Perry, Clifton	Kalamazoo		

Kent County

Adams, F. A.	Grand Rapids	Bosch, L. C.	Grand Rapids
Aitken, George T.	Grand Rapids	Brayman, C. W.	Cedar Springs
Bachman, G. A.	Grand Rapids	Brook, Jacob D.	Grandville
Baert, George H.	Grand Rapids	Brotherhood, J. S.	Grand Rapids
Baker, Abel J.	Grand Rapids	Browning, Eugene S.	Grand Rapids
Ballard, M. S.	Grand Rapids	Buesing, O. R.	Grand Rapids
Beel, Horace J.	Grand Rapids	Bull, Frank L.	Sparta
Beets, W. Clarence	Grand Rapids	Burling, Wesley M.	Grand Rapids
Beeman, C. B.	Grand Rapids	Butler, Wm. J.	Grand Rapids
Beeman, C. E.	Grand Rapids	Byers, Earl J.	Grand Rapids
Bettison, Wm. L.	Grand Rapids	Cameron, Don B.	Grand Rapids
Billings, Elton P.	Grand Rapids	Campbell, Alexander M.	Grand Rapids
Blackburn, Henry M.	Grand Rapids	Cardwell, John F.	Grand Rapids
Bloxsom, P. W.	Grand Rapids	Chadwick, Ward L.	Grand Rapids
Boet, F. A.	Grand Rapids	Chamberlain, L. H.	Grand Rapids
Bond, Geo. L.	Grand Rapids	Chandler, Donald	Grand Rapids

Cilley, E. O.	Grand Rapids
Claytor, R. W.	Grand Rapids
Collisi, H. S.	Grand Rapids
Colvin, W. G.	Grand Rapids
Corbus, Burton R.	Grand Rapids
Crane, Charles V.	Grand Rapids
Crane, Harold D.	Grand Rapids
Currier, Fred P.	Grand Rapids
Dales, Ernest W.	Grand Rapids
Davis, D. B.	Grand Rapids
Dean, Alfred W.	Grand Rapids
DeBoer, Guy W.	Grand Rapids
Dell, E. E.	Sand Lake
DeMaagd, Gerald	Rockford
DeMol, Richard J.	Grand Rapids
Denham, R. H.	Grand Rapids

JOUR. M.S.M.S.

ROSTER MICHIGAN STATE MEDICAL SOCIETY

DePree, Isla G.....	Grand Rapids	Kreulen, H. J.....	Grand Rapids	Roth, Emil M.....	Grand Rapids
DePree, Joseph.....	Grand Rapids	Krapp, C. G.....	Grand Rapids	Schermerhorn, L. J.....	Grand Rapids
DeVel, Leon.....	Grand Rapids	Laird, Robert G.....	Grand Rapids	Schnoor, E. W.....	Grand Rapids
DeVries, Daniel.....	Grand Rapids	Lamb, George F.....	Grand Rapids	Sevensma, E. S.....	Grand Rapids
Dewar, M. M.....	Grand Rapids	Lanning, N. E.....	Grand Rapids	Sevey, L. E.....	Grand Rapids
Dixon, Willis L.....	Grand Rapids	Lanting, D. B.....	Grand Rapids	Shepard, B. H.....	Lowell
Droste, James C.....	Grand Rapids	Lass, E. H.....	Grand Rapids	Shellman, Millard W.....	Grand Rapids
Eaton, Robert M.....	Grand Rapids	LeRoy, Simeon.....	Grand Rapids	Smith, A. B.....	Grand Rapids
Eggleston, H. R.....	Grand Rapids	Lieffers, Harry.....	Grand Rapids	Smith, Edwin M.....	Grand Rapids
Ferguson, Lynn A.....	Grand Rapids	Lyman, Wm. D.....	Grand Rapids	Smith, R. Earle.....	Grand Rapids
Ferguson, Ward S.....	Grand Rapids	MacPherson, Alex. G.....	Grand Rapids	Smith, Ferris N.....	Grand Rapids
Ferrand, L. G.....	Rockford	Marrin, M. M.....	Grand Rapids	Smith, Richard R.....	Grand Rapids
Fitts, Ralph L.....	Grand Rapids	Marsh, J. P.....	Grand Rapids	Snapp, Carl F.....	Grand Rapids
Flynn, J. Donald.....	Grand Rapids	Maurits, Reuben.....	Grand Rapids	Snyder, Clarence.....	Grand Rapids
Foshee, J. C.....	Grand Rapids	McDonell, James A.....	Lowell	Southwick, George H.....	Grand Rapids
Frantz, C. H.....	Grand Rapids	McKenna, J. L.....	Grand Rapids	Stonehouse, G. G.....	Grand Rapids
Fuller, E. H.....	Grand Rapids	McKinley, L. M.....	Grand Rapids	Stuart, G. J.....	Grand Rapids
Gainey, James J.....	Grand Rapids	McRae, John H.....	Grand Rapids	Sugg, Cullen E.....	Grand Rapids
Gaikema, E. W.....	Grand Rapids	Meengs, Jacob E.....	Grand Rapids	Swenson, H. C.....	Grand Rapids
Greenen, C. J.....	Grand Rapids	Mehney, G. H.....	Grand Rapids	Ten Have, J.....	Grand Rapids
German, William McK.....	Grand Rapids	Miller, Fred E.....	Grand Rapids	Teusink, J. H.....	Cedar Springs
Gillett, O. H.....	Grand Rapids	Miller, J. Duane.....	Grand Rapids	Tidey, Marcus B.....	Grand Rapids
Grant, Lee O.....	Grand Rapids	Miller, J. J.....	Marne	Tolley, Edw. W.....	Grand Rapids
Graybiel, George.....	Caledonia	Mitchell, H. C.....	Grand Rapids	Torgerson, Wm. R.....	Grand Rapids
Griffith, L. S.....	Grand Rapids	Mitchell, W. B.....	Grand Rapids	Van Bree, R. S.....	Grand Rapids
Hagerman, D. B.....	Grand Rapids	Moen, Cornetta, G.....	Grand Rapids	Vanden Berg, Henry J.....	Grand Rapids
Hammond, T. W.....	Grand Rapids	Moll, Arthur M.....	Grand Rapids	Van Duine, H.....	Bryon Center
Hartman, Deane C.....	Grand Rapids	Mollman, Arthur.....	Grand Rapids	Van Solkema, Arthur.....	Grandville
Hayes, L. W.....	Howard City	Moore, Vernor, M.....	Grand Rapids	Van Woerkom, Daniel.....	Grand Rapids
Heetderks, Dewey R.....	Grand Rapids	Mulder, J. D.....	Grand Rapids	Vann, Norman S.....	Grand Rapids
Henry, James, Jr.....	Grand Rapids	Murphy, M. J.....	Grand Rapids	Veldman, Harold E.....	Grand Rapids
Herrick, Ruth.....	Grand Rapids	Nelson, A. R.....	Grand Rapids	Veenboer, Wm. H.....	Grand Rapids
Hill, A. M.....	Grand Rapids	Nesbitt, E. N.....	Grand Rapids	Vis, William R.....	Grand Rapids
Hodgen, J. T.....	Grand Rapids	Noordewier, Albert.....	Grand Rapids	Votey, Frank A.....	Grand Rapids
Holcomb, John N.....	Grand Rapids	Northouse, Peter B.....	Grandville	Vyn, J. D.....	Grand Rapids
Holcomb, J. W.....	Grand Rapids	Northrup, Wm.....	Grand Rapids	Webb, Rowland.....	Grand Rapids
Holdsworth, M. J.....	Grand Rapids	Nyland, Albertus (Honorary).....		Webster, G. W.....	Grand Rapids
Hufford, A. R.....	Grand Rapids	Oliver, W. W.....	Grand Rapids	Wells, Merrill.....	Grand Rapids
Hunderman, Edw.....	Grand Rapids	Patterson, P. W.....	Grand Rapids	Wenger, A. V.....	Grand Rapids
Hutchinson, Robert J.....	Grand Rapids	Pedden, J. R.....	Grand Rapids	Wenger, John N.....	Coopersville
Hyland, Wm. A.....	Grand Rapids	Phillips, J. W.....	Grand Rapids	Westrate, Paul.....	Grand Rapids
Irwin, Thomas C.....	Grand Rapids	Pyle, Henry J.....	Grand Rapids	Whalen, John M.....	Grand Rapids
Ingersoll, Charles F.....	Grand Rapids	Ralph, L. Paul.....	Grand Rapids	Whinery, Joseph B.....	Grand Rapids
Jaracz, W. J.....	Grand Rapids	Rawson, A. P.....	Grand Rapids	Whinery, J. F.....	Grand Rapids
Kelly, Robert E.....	Grand Rapids	Reed, Torrance.....	Grand Rapids	Willits, P. W.....	Grand Rapids
Kemmer, Thomas R.....	Grand Rapids	Rigterink, J. W.....	Grand Rapids	Wolfe, H. C.....	Grand Rapids
Kendall, Eugene L.....	Grand Rapids	Riley, G. L.....	Grand Rapids	Woodburne, A. R.....	Grand Rapids
Klaus, C. D.....	Grand Rapids	Roberts, Mortimer E.....	Grand Rapids	Wright, John M.....	Grand Rapids
Kniskern, P. W.....	Grand Rapids	Robinson, Harold.....	Grand Rapids	Yegge, J. P.....	Kent City
Kooistra, Henry P.....	Grand Rapids	Rogers, John R.....	Grand Rapids		
Kremer, John.....	Grand Rapids				

Lapeer County

Berghorst, John.....	Imlay City	Crankshaw, D. W.....	Imlay City	Merz, Henry G.....	Lapeer
Best, Herbert M.....	Lapeer	Dorland, Clark.....	Lapeer	O'Brien, Daniel J.....	Lapeer
Bishop, G. C.....	Almont	Hanna, Fred R.....	Lapeer	Thomas, J. Orville.....	North Branch
Burley, David H.....	Almont	Jackson, Carl C.....	Imlay City	Tinker, F. A. (Emeritus).....	Lapeer
Chapin, Clarence D.....	Columbiaville	McBride, J. R.....	North Branch	Zemmer, H. B.....	Lapeer

Lenawee County

Abraham, A. O.....	Hudson	Hardy, P. B.....	Tecumseh	Marsh, R. G. B.....	Tecumseh
Beebe, I. J.....	Morenci	Heffron, C. H.....	Adrian	Miller, Perry L.....	Adrian
Blanchard, L. E.....	Hudson	Heffron, Howard H.....	Adrian	Morden, Eslie T.....	Adrian
Bland, J. P.....	Adrian	Helzerman, Ralph F.....	Tecumseh	Murawa, V. J.....	Deerfield
Case, C. W.....	Onsted	Hewes, A. B.....	Adrian	Patmos, Bernard.....	Adrian
Chase, Armetus W.....	Adrian	Hornsby, W. B.....	Clinton	Peters, W. L.....	Morenci
Claflin, G. M.....	Deerfield	Howland, F. A.....	Adrian	Raabe, E. C.....	Morenci
Clark, A. D.....	Adrian	Jewett, Wm. E., Jr.....	Adrian	Rogers, J. D.....	Adrian
Claxton, W. T.....	Britton	Lamley, Arthur E.....	Blissfield	Spalding, A. L.....	Hudson
Colbath, W. E.....	Adrian	Lamley, Geo. H.....	Blissfield	Stafford, Leo. J.....	Adrian
Growth, B. H.....	Addison	Lane, C. S.....	Hudson	Tubbs, R. V.....	Blissfield
Hall, George C.....	Adrian	Loveland, Horace H.....	Tecumseh	Van Dusen, C. A.....	Blissfield
Hambly, S. B.....	Onsted	MacKenzie, W. S.....	Adrian	Whitney, O.....	Adrian
Hammel, H. H.....	Tecumseh	McCue, F. J.....	Hudson	Wood, A. C.....	Adrian

Livingston County

Backe, John C.....	Detroit	Hill, Harold C.....	Howell	McGregor, Archie J.....	Brighton
Brigham, Jeanette.....	Howell	Hendren, J. J.....	Fowlerville	McIndoe, R. Bruce.....	Howell
Burt, K. L.....	Howell	Huntington, H. G.....	Howell	Mellus, H. P.....	Brighton
Cameron, Duncan A.....	Brighton	Laboe, Edward W.....	Howell	Sigler, Hollis L.....	Howell
Glenn, Bernard H.....	Fowlerville	Leslie, G. L.....	Howell	Stephens, Duncan C.....	Howell
Hayner, R. A.....	Howell	Lojacono, Salvatore.....	Howell		

Luce County

Perry, Henry E.....	Newberry	Surrell, Mathew A.....	Newberry
Purmort, Wm. R., Jr.....	Newberry	Swanson, George F.....	Newberry
Rehn, Adolph T.....	Newberry	Toms, Charles B.....	Newberry
Spinks, Robert E.....	Newberry		

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Macomb County

Allen, LeRoy K.	Roseville	Hawley, R. E.	St. Clair Shores	Russell, T. P.	Centerline
Bailey, R.	St. Clair Shores	Heine, Austin W.	Mt. Clemens	Salot, R. F.	Mt. Clemens
Banting, O. F.	Richmond	Kane, Wm. J.	Mt. Clemens	Scher, Joseph N.	Mt. Clemens
Berry, Henry G.	Mt. Clemens	Lane, W. D.	Romeo	Seaman, John	New Haven
Bower, A. B.	Armada	Lynch, Russell	Centerline	Smith, M. C.	Mt. Clemens
Caster, E. Wilbur	Mt. Clemens	Meek, Charles	New Baltimore	Sturm, Fred A.	St. Clair Shores
Cromen, Joseph M., Jr.	Mt. Clemens	Moore, G. F.	Mt. Clemens	Thompson, A. A.	Mt. Clemens
Cromen, Joseph M., Sr.	Mt. Clemens	Norton, W. H.	Mt. Clemens	Ullrich, R. W.	Mt. Clemens
Curlett, J. E.	Roseville	Reichman, Joseph J.	Mt. Clemens	Wilde, M. M.	Warren
Dudzinski, E. J.	New Baltimore	Rivard, C. H.	St. Clair Shores	Wiley, Bruce	Utica
Engels, John A.	Richmond	Rothman, A. M.	East Detroit	Wiley, Herbert H.	Utica
Fluemer, Oswald	Mt. Clemens	Reitzel, Rufus H.	Mt. Clemens	Wolfson, Victor H.	Mt. Clemens
Greenshields, Robert	Romeo	Ruedisueli, C. A.	East Detroit		

Manistee County

Bryan, Kathryn M.	Manistee	Konopa, John F.	Manistee	Mullenmeister, H. F.	Bear Lake
Grant, C. L.	Manistee	Lewis, Lee A.	Manistee	Norconk, Ward H.	Bear Lake
Fairbanks, Stephen	Luther	MacMullen, Harlen	Manistee	Oakes, Ellery A.	Manistee
Hansen, E. C.	Manistee	McKay, A. A.	Midland	Ramsdell, Homer A.	Manistee
Jamieson, David A.	Arcadia	Miller, E. B.	Manistee	Switzer, Lars W.	Manistee

Marquette-Alger Counties

Barnes, Haldor	Munising	Felch, Theodore A. (Honorary)	Ishpeming	McIntyre, D. R.	Negaunee
Bennett, Arthur K.	Marquette	Fennig, F. A.	Marquette	Mudge, W. A.	Negaunee
Berry, Robert F.	Morgan Heights	Hanelin, H. A.	Marquette	Niemi, O. I.	Marquette
Bertucci, J. P.	Ishpeming	Hartt, P. P.	Ishpeming	Picotte, Wilfrid S.	Ishpeming
Burke, R. A.	Palmer	Hirwas, D. L.	Marquette	Robbins, Nelson J.	Negaunee
Casler, W. L.	Marquette	Hornbogen, D. P.	Marquette	Schutze, W. J.	Munising
Cooperstock, M.	Marquette	Janes, R. Grant	Marquette	Serbst, Charles	Grawn
Corcoran, W. A.	Ishpeming	Keskey, Geo. I.	Marquette	Sicotte, Isiah	Michiganne
Cowan, Donald	Marquette	Lambert, W. C.	Marquette	Swinton, A. L.	Marquette
Crane, J. D.	Ishpeming	LeGolyan, C.	Marquette	Talso, Jacob	Ishpeming
Drury, Chas. P.	Marquette	Lindquist, N. L.	Negaunee	Vandeveer, Vivian H.	Ishpeming
Elzinga, E. R.	Marquette	McCann, Neal J.	Ishpeming	Van Riper, Paul	Champion
Erickson, Arvid W.	Ishpeming			Wickstrom, G. W.	Munising

Mason County

Blanchett, Victor J.	Custer	Hunt, Ivan L.	Scottville	Spencer, C. M.	Scottville
Force, Wm. H.	Ludington	Kirwan, Edward J.	Ludington	Switzer, G. O. (Honorary)	Ludington
Goulet, L. J.	Ludington	Martin, Wm. S.	Ludington	Taylor, W. H.	Ludington
Hoffman, Howard	Ludington	Paukstis, Charles	Ludington		

Mecosta-Osceola Counties

Bruggema, Jacob	Evart	Grieve, Glenn	Big Rapids	Peck, Louis K.	Barryton
Bunce, E. P.	Trufant	Ilgoe, Max C.	Big Rapids	Power, C. J.	Remus
Campbell, James B.	Big Rapids	Inkovich, Paul	Evart	Soper, Charles L.	Barryton
Chess, Leo F.	Reed City	Kilmer, Paul B.	Reed City	Treynor, Thomas P.	Big Rapids
Clark, Chester	Morley	McIntyre, Donald	Big Rapids	White, J. A.	Morley
Franklin, Benjamin L.	Remus	McGrath, V. J.	Reed City	Yeo, Gordon H.	Big Rapids

Menominee County

Berg, Laurence A.	Menominee	Kerwell, K. C.	Stephenson	Schaen, Irvin	Hermansville
DeWane, F. J.	Menominee	Mason, Stephen C.	Menominee	Scully, John C.	Menominee
Flanagan, Clarence B.	Menominee	Peterson, A. R.	Daggett	Setheny, Henry T.	Menominee
Jones, Wm. S.	Menominee	Bridge, Edward (Emeritus)	Stephenson	Towey, J. W.	Powers
Kaye, J. T.	Menominee				

Midland County

Beck, Frank K.	Coleman	Kazdan, Louis	Midland	Place, Edwin H.	Midland
Gay, Harold H.	Midland	McCallum, Charles	Midland	Sherk, J. H.	Midland
Gewe, N. C.	Midland	Maynard, W. A.	Coleman	Sjolander, Gust	Midland
High, C. V.	Midland	Meisel, E. H.	Midland	Pike, Melvin H.	Midland

Monroe County

Ames, Florence	Monroe	Golvinaux, C. J.	Monroe	McMillin, J. H.	Monroe
Barker, Vincent L.	Monroe	Graubner, F. L.	Monroe	Meck, H. L.	Dundee
Bond, W. W.	Monroe	Heffernan, J. F.	Carleton	Newcomb, S. O.	Ida
Cooper, E. M.	Rockwood	Humphrey, J. A.	Monroe	Parmelee, O. E.	Lambertville
Denman, Dean C.	Monroe	Hunter, M. A.	Monroe	Reisig, A. H.	Monroe
Dusseau, S. V.	Erie	Landon, Herbert W.	Monroe	Siffer, J. J.	Monroe
English, R. I.	Temperance	Long, Edgar C.	Monroe	Smith, Wm. A.	Petersburg
Ewing, R. T.	Monroe	Long, Sara	Monroe	Stolpestad, C. T.	Monroe
Gelhaus, Wm. J.	Monroe	McDonald, T. A.	Monroe	Tomlinson, Ledyard	Newport
Glenn, Audrey	Monroe	McGeoch, R. W.	Monroe	Williams, Robert J.	Monroe

JOUR. M.S.M.S.

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Muskegon County

Anderson, A. J.	Muskegon	Fleischman, C. B.	Muskegon	Loomis, John L.	Muskegon
August, R. V.	Muskegon Heights	Fleishman, Norman	Muskegon	Loughery, H. B.	Muskegon
Barnard, Helen	Muskegon	Foss, Ed. O.	Muskegon	Mandeville, C. B.	Muskegon
Bartlett, F. H.	Muskegon	Garber, F. W. Jr.	Muskegon	Meengs, M. B.	Muskegon
Beers, Charles	Holtom	Garland, J. O.	Muskegon	Medema, Paul E.	Muskegon
Bloom, C. J.	Muskegon	Gillard, James	Muskegon	Miller, Philip L.	Muskegon
Boonstra, Frank	Muskegon	Goltz, Martha	Montague	Morford, F. N.	Muskegon
Bowers, J. G.	Muskegon	Hagen, William A.	Muskegon	Morse, Bertram W.	Whitehall
Boyd, D. R.	Muskegon	Hannum, F. W.	Muskegon	Mulligan, A. W.	Muskegon
Bradshaw, Park S.	Muskegon	Harrington, A. F.	Muskegon	Oden, Constantine L.	Muskegon
Cavanagh, R. G.	Muskegon	Harrington, R. J.	Muskegon	Olson, R. G.	Muskegon Heights
Chapin, Wm. S.	Muskegon Heights	Hartwell, S. W.	Muskegon	Pangerl, Carl	Muskegon Heights
Closz, H. F.	Muskegon	Heneveld, John	Muskegon	Pettis, Emmett	Muskegon
Cohan, Sol G.	Muskegon	Holly, Leland E.	Muskegon	Powers, Lunette	Muskegon
Colignon, C. M.	Muskegon	Holmes, Roy H.	Muskegon	Price, Leonard	Muskegon
Collier, C. C.	Whitehall	Jackson, S. A.	Muskegon	Pyle, H. J.	Muskegon
D'Alcorn, Ernest	Muskegon	Kane, Thomas J.	Muskegon	Risk, R. A.	Muskegon
Dasler, A. F.	Muskegon Heights	Keilin, Marie	Muskegon	Risk, Robert D.	Muskegon
Derezinski, Clement F.	Muskegon	Kerr, H. J.	Muskegon	Scholte, W.	Muskegon
Diskin, Frank	Muskegon	Kniskern, E. L.	Muskegon	Spoor, A. A.	Muskegon
Dolfin, W. E.	Muskegon	LeFevre, George L.	Muskegon	Stone, Maxwell E.	Muskegon
Douglas, Robert	Muskegon	LeFevre, Louis	Muskegon	Swartout, W. C.	Muskegon
Drummond, S. J.	Casnovia	LeFevre, William M.	Muskegon	Teifer, Charles A.	Muskegon
Durham, C. J.	Muskegon	LaCore, O. M.	Muskegon Heights	Thieme, S. W.	Ravenna
Eckerman, C. T.	Muskegon	Lange, E. W.	Muskegon	Thornton, E. S.	Muskegon
Egan, A. B.	Muskegon	Lauretti, Emil	Muskegon	Wilke, C. A.	Montague
Fillingham, Enid	Muskegon	Laurin, V. S.	Muskegon	Wilson, P. S.	Muskegon

Newaygo County

Barnum, W. H.	Fremont	Geerlings, Willis	Fremont	Stevens, S.	Bitezly
Deur, T. R.	Grant	Lettinga, D.	Grant	Stryker, O. D.	Fremont
Geerlings, Lambert	Fremont	Moore, H. R.	Newaygo	Tompsett, Arthur C.	Hesperia
		Post, Guy	White Cloud		

Northern Michigan

Armstrong, Robert B.	Charlevoix	Harrington, H. M.	East Jordan	Monfort, Robert	Onaway
Burns, Dean C.	Petoskey	Huebner, A. C.	Onaway	Palmer, Russell	St. James
Conkle, Guy C.	Boyne City	King, Geo. W.	Charlevoix	Parks, W. H.	Petoskey
Conway, Wm. S.	Petoskey	Larson, W. E.	Levering	Reed, Wilbur F. (Emeritus)	Cheboygan
Craddock, John	Mackinaw City	Lashmet, Floyd H.	Petoskey	Rodgers, John	Bellaire
Dean, Carlton	Charlevoix	MacGregor, J. G.	Boyne City	Saltonstall, Gilbert B.	Charlevoix
Dufne, Don H.	Central Lake	Mast, W. H.	Petoskey	Stringham, J. R.	Cheboygan
Engle, Ralph D.	Petoskey	Mayne, Frederick C.	Cheboygan	Van Dellen, Jerrian	Ellsworth
Frank, Gilbert E.	Harbor Springs	McClure, Robert J.	Charlevoix	Van Leuven, B. H.	Petoskey
Grillet, F. F.	Alanson	McMillan, Fraley	Charlevoix		
		Miller, Samuel L.	Cheboygan		

O.M.C.O.R.O. County

Beeby, R. J.	West Branch	Inman, J.	Kalkaska	McDowell, Douglas	West Branch
Clippert, C. G.	Grayling	Jardine, Hugh	West Branch	McKillop, G. L.	Gaylord
Crandell, C. H.	West Branch	Keyport, C. R.	Grayling	Peckham, Richard	Gaylord
Egle, Joseph L.	Gaylord	Lee, F. W.	Fairview	Sargent, L. E.	Kalkaska
Ford, Ruey O.	Gaylord	Martzowka, M. A.	Roscommon	Stealey, Stanley	Grayling
Harris, Levi A. (Emeritus)	Gaylord	McDowell, A. S.	West Branch	Thompson, Sue H.	West Branch

Oakland County

Abbott, V. C.	Pontiac	Green, Wm. M.	Pontiac	Reid, F. T.	Clawson
Aschenbrenner, Z. R.	Farmington	Hackett, Daniel J.	Pontiac	Riker, Aaron D.	Pontiac
Bachelder, Frank S.	Pontiac	Halsted, Lee H.	Farmington	Roehm, Harold R.	Birmingham
Bachelor, John W.	Oxford	Hammer, Carl W.	Oxford	Rooks, Wendell H.	Pontiac
Baker, Frederick A.	Pontiac	Hammonds, E. E.	Birmingham	Russell, Vincent	Royal Oak
Baker, Robert H.	Pontiac	Hathaway, Clarence L.	Lake Orion	St. John, Harold A.	Pontiac
Barker, Howard B.	Pontiac	Hathaway, Wm.	Rochester	Seaborn, A. J.	Royal Oak
Bauer, Ernest W.	Hazel Park	Harvey, Campbell	Pontiac	Schoenfeld, John D.	Birmingham
Beck, O. O.	Birmingham	Henry, Colonel R.	Ferndale	Sheffield, L. C.	Pontiac
Benning, C. H.	Peoria, Ill.	Huffman, M. R.	Milford	Sherman, G. A.	Pontiac
Borland, Alexander	Pontiac	Howlett, E. V.	Pontiac	Sibley, H. A.	Pontiac
Burke, Chauncey G.	Pontiac	Hoyt, D. F.	Pontiac	Simpson, E. K.	Pontiac
Burt, F. J.	Holly	Hume, T. W. K.	Auburn Heights	Spears, M. L.	Pontiac
Butler, Samuel A.	Pontiac	Hurst, Daniel D.	Pleasant Ridge	Spencer, Lloyd H.	Royal Oak
Cameron, D. A.	Royal Oak	Jones, Morrell M.	Pontiac	Spoehr, Eugene L.	Ferndale
Castell, Daniel G.	Pontiac	Kemp, W. Lloyd	Birmingham	Sphoer, Earl	Royal Oak
Christie, J. W.	Pontiac	Lambert, Alvin G.	Ferndale	Stahl, Harold E.	Oxford
Church, J. E.	Pontiac	Lambie, John S.	Pontiac	Stanley, Wm. F.	Ferndale
Cobb, Leon F.	Pontiac	Lewis, Sol M.	Ferndale	Starker, Clarence T.	Pontiac
Cooper, Robert J.	Pontiac	Lindsay, E. J.	Walled Lake	Steinberg, Norman	Royal Oak
Crissman, H. C.	Ferndale	Margraves, Edmund D.	Royal Oak	Stolzman, A. K.	Birmingham
Cudney, Ethan B.	Pontiac	Markley, John M.	Pontiac	Strain, C. S.	Rochester
Dahlgren, Carl	Keego Harbor	McConkie, J. P.	Birmingham	Sutherland, Clark J.	Clarkston
Darling, C. G., Jr.	Pontiac	McEvoy, Francis J.	Royal Oak	Sutton, Palmer E.	Royal Oak
Ekelund, C. T.	Pontiac	McNeill, H. H.	Pontiac	Terry, Stuart	Pontiac
Farnham, Lucius A.	Pontiac	Mercer, Frank A.	Pontiac	Tuck, R. G.	Pontiac
Ferris, Ralph G.	Birmingham	Mienke, Herman E.	Hazel Park	Wagley, P. V.	Pontiac
Fitzpatrick, Francis	Pontiac	Miller, Raymond E.	Clarkston	Wagner, Ruth E.	Royal Oak
Fox, John W.	Pontiac	Mitchell, B. M.	Pontiac	Watson, Arthur M.	Lake Orion
Furlong, Harold A.	Pontiac	Mooney, C. A.	Ferndale	Watson, Thomas Y.	Birmingham
Gariepy, Bernard F.	Royal Oak	Morrison, J. S.	Royal Oak	Wiers, W. W.	Royal Oak
Gatley, L. Warren	Pontiac	Neafie, Chas. A.	Pontiac	Williams, Hugh W.	Pontiac
Gerls, Frank B.	Pontiac	Olsen, Richard E.	Pontiac	Yoh, Harry B.	Pontiac
German, Frank D.	Pontiac	Pauli, Theodore H.	Pontiac	Young, Arthur R.	Pontiac
Gordon, J. H.	Birmingham	Pool, H. H.	Pontiac		
Grant, Wm. A.	Milford	Porritt, Ross J.	Pontiac		

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Oceana County

Day, Clinton.....	Hart	Heysett, N. W.....	Hart	Nicholson, John H.....	Hart
Hayton, A. R.....	Shelby	Jensen, Viggo.....	Shelby	Reetz, Fred A.....	Shelby
Heard, William.....	Pentwater	Lemke, Walter M.....	Shelby	Wood, Merle G.....	Hart

Ontonagon County

Bender, Jesse L.....	Mass	Hogue, H. B.....	Ewen	Strong, W. F.....	Ontonagon
Corkill, C. C.....	Ontonagon	McHugh, Frank W.....	Ontonagon	Whiteshield, C. F.....	Trout Creek
Evans, Edwin J.....	Ontonagon	Rubinfeld, S. H.....	Ontonagon		

Ottawa County

Beernink, E. H.....	Grand Haven	Huizinga, John G.....	Holland	Ten Have, Ralph.....	Grand Haven
Bloemendaal, D. C.....	Zeeland	Irvin, H. C.....	Holland	Timmerman, E. C.....	Coopersville
Bloemendaal, W. B.....	Grand Haven	Kemme, Gerrit.....	Zeeland	Ver Duin, J.....	Grand Haven
Boone, Cornelius E.....	Zeeland	Kools, Wm. C.....	Holland	Van Der Berg, E.....	Holland
Bos, G. D.....	Holland	Leenhouts, Abraham.....	Holland	Van der Velde, O.....	Holland
Clark, N. H.....	Holland	Long, C. E.....	Grand Haven	Wells, Kenneth.....	Spring Lake
DeVries, H. C.....	Holland	Mulder, C. D.....	Spring Lake	Westrate, William.....	Holland
DeWitt, S. L.....	Grand Haven	Nichols, Rudolph H.....	Holland	Wiersma, Silas C.....	Hudsonville
Harms, H. P.....	Holland	Presley, Wm. J.....	Grand Haven	Winters, John K.....	Holland
House, M. E.....	Holland	Stickley, A. E.....	Coopersville	Winters, Wm. G.....	Holland
		Tappan, Wm. M.....	Holland		

Saginaw County

Ackerman, G. L.....	Saginaw	Hill, Victor L.....	Saginaw	Murphy, Albert P.....	Saginaw
Anderson, W. K.....	Saginaw	Hohn, F. J.....	Saginaw	Murray, Charles R.....	Saginaw
Bagley, U. S.....	Saginaw	Iberman, Harold M.....	Saginaw	Novy, F. O.....	Saginaw
Bagshaw, David E.....	Saginaw	Jaenichen, R.....	Saginaw	O'Reilly, Wm. J.....	Saginaw
Beckwith, Bertram H.....	Saginaw	James, J. W.....	Saginaw	Ostrander, Frank W.....	Freeland
Berberovitch, T. F.....	Saginaw	Jiroch, R. S.....	Saginaw	Pietz, Frederick.....	Saginaw
Bishop, H. M.....	Saginaw	Jordan, Leo A.....	Saginaw	Pillsbury, Edw. A.....	Frankenmuth
Brender, Fred P.....	Frankenmuth	Kahn, Paul.....	Frankenmuth	Poole, Frank A.....	Saginaw
Brock, W. H.....	Saginaw	Keller, S. S.....	Saginaw	Potvin, Clifford D.....	Merrill
Butler, M. G.....	Saginaw	Kemp, J.....	Saginaw	Richter, Emil P. W.....	Saginaw
Button, A. C.....	Saginaw	Kempton, R. M.....	Saginaw	Rosenberg, Robert.....	Saginaw
Cady, F. J.....	Saginaw	Kirchgerog, Clemens G.....	Frankenmuth	Rubin, H.....	Saginaw
Cameron, Allen K.....	Saginaw	Kleekamp, H.....	Saginaw	Ryan, M. D.....	Saginaw
Campbell, L. A.....	Saginaw	Knott, Harriet.....	Saginaw	Ryan, R. S.....	Saginaw
Catizone, R. J.....	Merrill	Leitch, Arthur E.....	Saginaw	Sample, Chester H. (Honorary).....	Saginaw
Clark, Wilbert B.....	Saginaw	Ling, Ernest M.....	Saginaw	Sample, J. T.....	Saginaw
Claytor, Archer A.....	Saginaw	Longstreet, Martha L.....	Saginaw	Sargent, D. V.....	Saginaw
Cortopassi, Andre.....	Saginaw	Luger, F. E.....	Saginaw	Schaiberger, Elmer.....	Saginaw
Durman, Donald.....	Saginaw	MacKinnon, Edwin D.....	Saginaw	Sheldon, S.....	Saginaw
Ely, C. W.....	Saginaw	Markey, Joseph P.....	Saginaw	Slack, Walter K.....	Saginaw
English, William F.....	Saginaw	Martzowka, Wm. P.....	Saginaw	Stander, A. C.....	Saginaw
Ernst, Arthur R.....	Saginaw	Maurer, John A.....	Saginaw	Thomas, Dale.....	Saginaw
Eymar, Esther.....	Saginaw	McClinton, N. F.....	Saginaw	Tiedke, G. E.....	Saginaw
Fleschner, Thomas E.....	Birch Run	McGregor, R.....	Saginaw	Toshach, C. E.....	Saginaw
Freeman, Frederick W.....	Saginaw	McKinney, Alex R.....	Saginaw	Wallace, H. C.....	Saginaw
Galsterer, E. C.....	Saginaw	McLandress, Joshua A.....	Saginaw	Wheeler, Dorothy.....	Saginaw
Goman, Louis D.....	Saginaw	McMeekin, James W.....	Saginaw	Wilson, H. Roy.....	Saginaw
Grigg, Arthur.....	Saginaw	Meyer, Henry J.....	Saginaw	Wixted, John F.....	Chesaning
Hand, Eugene.....	Saginaw	Moon, A. R.....	Saginaw	Wixted, Julia L.....	Chesaning
Harvie, L. C.....	Saginaw	Morris, Keith M.....	Saginaw	Yntema, S.....	Saginaw
Helmkamp, Herbert O.....	Saginaw	Mudd, Richard D.....	Saginaw		
Hester, E. G.....	Saginaw				

St. Clair County

Armsbury, A. B.....	Marine City	Engelman, A. A.....	St. Clair	Pollock, Donald A.....	Yale
Atkinson, J. M.....	Port Huron	Fraser, Robert C.....	Port Huron	Reynolds, Annie E.....	Port Huron
Attridge, J. A.....	Port Huron	Heavenrich, T. F.....	Port Huron	Ryerson, W. W.....	Port Huron
Battley, J. C. Sinclair.....	Port Huron	Holcomb, R. J.....	Marine City	Schaefer, W. A.....	Port Huron
Borden, C. L.....	Yale	Johnson, Howard R.....	Shop Hill, Ill.	Sites, E. C.....	Port Huron
Boughner, W. H.....	Algonac	Kesl, Geo. M.....	Port Huron	Smith, Reginald.....	Port Huron
Bovee, M. E.....	Port Huron	LeGalley, K. B.....	Port Huron	Thomas, C. F.....	Port Huron
Brush, Howard O.....	Port Huron	Licker, R. R.....	Port Huron	Treadgold, Douglas.....	Port Huron
Burke, Ralph M.....	Port Huron	Ludwig, F. E.....	Port Huron	Vromann, M. E.....	Port Huron
Burley, Jacob H.....	Port Huron	McCue, Crystal C.....	Goodells	Waltz, J. F.....	Capac
Callery, A. L.....	Port Huron	MacKenzie, Alexander J.....	Port Huron	Ware, John R.....	Port Huron
Campbell, R. H.....	St. Clair	MacPherson, C. A.....	St. Clair	Wass, Henry C.....	St. Clair
Carney, F. V.....	St. Clair	Martin, C. S.....	Port Huron	Waters, George.....	Port Huron
Cooper, T. H.....	Port Huron	McColl, D. J.....	Port Huron	Wellman, Joseph E.....	Port Huron
DeGurse, T. E.....	Marine City	McColl, Neil J.....	Port Huron	Wight, William G.....	Yale
Derck, W. P.....	Marysville	Meredith, E. W.....	Port Huron	Zemmer, Adrian L.....	Port Huron
		Patterson, D. W.....	Port Huron		

St. Joseph County

Buell, Martin.....	Sturgis	Miller, C. G.....	Sturgis	Springer, R. A.....	Centerville
Fiegel, S. A.....	Sturgis	Parrish, Marion F.....	Sturgis	Sweetland, G. J.....	Constantine
Fortner, R. J.....	Three Rivers	Rice, John W.....	Sturgis	Weir, D. C.....	Three Rivers
Hoekman, Aben.....	Constantine	Shaw, G. D.....	Mendon	Wilker, Nina C.....	Sturgis
Kane, David M.....	Sturgis	Sheldon, J. P.....	Sturgis	Ziment, R. D.....	Constantine
		Slote, L. K.....	Constantine		

Schoolcraft County

Broberg, Gail.....	Manistique	Ross, Donald.....	Manistique	Tucker, A. R.....	Manistique
Fylie, James.....	Manistique	Shaw, George A.....	Manistique		

ROSTER MICHIGAN STATE MEDICAL SOCIETY

Shiawassee County

Alexander, Reuben G.	Laingsburg		
Arnold, Alfred L., Jr.	Owosso		
Arnold, A. L., Sr. (Emeritus)	Owosso		
Bates, L. F.	Durand		
Brandel, J. M.	Owosso		
Brown, Richard J.	Owosso		
Buzzard, Walter D.	Chesaning		
Carney, Edward J.	Durand		
Cramer, Geo. L. G.	Owosso		
Crane, C. A.	Corunna		
Fillinger, W. B.	Ovid		
Greene, I. W.	Owosso		
Haviland, James J.	Owosso		
Hume, Arthur M. (Emeritus)	Owosso		
Hume, Harold A.	Owosso		
Janci, Julius	Owosso		
Linden, V. E.	Durand		
McElmurry, N. K.	Perry		
McKnight, E. R.	Owosso		
Parker, W. T.	Owosso		
Pochert, R. C.	Owosso		
Richards, C. J.	Durand		
Sackrider, Geo. P.	Owosso		
Shepherd, W. F.	Owosso		
Slagh, E. M.	Elsie		
Soule, Glenn T.	Henderson		
Taylor, W. M.	Ovid		
Wade, G. B.	Laingsburg		
Ward, Walter E. (Emeritus)	Owosso		
Watts, Fred A.	Owosso		
Weinkauf, W. F.	Corunna		
Wilcox, Anna L.	Owosso		
Wilcox, C. M.	Owosso		

Tuscola County

Barbour, Harry A.	Mayville		
Bates, George	Kingston		
Cook, Raymond	Akron		
Dickerson, W. W.	Wahjamega		
Dixon, Robert L.	Wahjamega		
Donahue, H. Theron	Cass City		
Gugino, Frank J.	Reese		
Handy, John E. (Emeritus)	Caro		
Hoffman, T. E.	Vassar		
Howlett, Robert R.	Caro		
Johnson, O. G.	Mayville		
Kaven, G. H.	Unionville		
Kralick, Louise C.	Wahjamega		
MacRae, L. D.	Gagetown		
Maurer, J. G.	Reese		
McCoy, L. D.	Bad Axe		
Merrill, Elmer H.	Caro		
Morris, Frank L.	Cass City		
Petrie, W. P.	Caro		
Ross, Alexander T.	Wahjamega		
Rundell, Annie Stevens	Vassar		
Ruskin, D. B.	Fairgrove		
Salot, D. G.	Millington		
Savage, Lloyd L.	Caro		
Spohn, U. G.	Fairgrove		
Starmann, Bernard H.	Cass City		
Swanson, Ewald C.	Vassar		
Vatz, Jack A.	Millington		
Vail, Harry F.	Unionville		
Von Renner, Otto	Vassar		

Washtenaw County

Alexander, John	Ann Arbor		
Adams, James F.	Ann Arbor		
Badgley, Carl	Ann Arbor		
Ballmer, Robert S.	Ann Arbor		
Barker, Paul	Ann Arbor		
Barnwell, John	Ann Arbor		
Barr, A. S.	Ann Arbor		
Bars, Harold D.	Ypsilanti		
Bartlett, R. M.	Ann Arbor		
Bassow, Paul	Ann Arbor		
Beebe, Hugh M.	Ann Arbor		
Bell, Margaret	Ann Arbor		
Belote, G. H.	Ann Arbor		
Belsler, Walter	Ann Arbor		
Bigelow, Robert B.	Boston, Mass.		
Boyd, David A.	Ann Arbor		
Brace, Wm. M.	Ann Arbor		
Braden, Spencer	Ann Arbor		
Breakey, Jas. R.	Ypsilanti		
Brinkman, Harry	Ann Arbor		
Brown, Phillip	Ypsilanti		
Brown, Willis E.	Ann Arbor		
Brownell, Durwin	Ann Arbor		
Bruce, James D.	Ann Arbor		
Camp, Carl Dudley	Ann Arbor		
Carpenter, L. C.	Ann Arbor		
Clements, Glenn T.	Ann Arbor		
Coller, F. A.	Ann Arbor		
Combs, Arnold B.	Ann Arbor		
Conn, Jerome W.	Ann Arbor		
Cowie, D. M.	Ann Arbor		
Cummings, H. H.	Ann Arbor		
Curtis, A. C.	Ann Arbor		
Davis, Marion I.	Ann Arbor		
DeJong, Russell	Ann Arbor		
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Blumenthal, Franz L.	Eloise	Hammond, James L.	Inkster	Phillips, Fred W.	River Rouge
Bogusz, L.	Eloise	Hanson, Frederick N.	Eloise	Pinchard, Karl G.	Dearborn
Boyd, John H.	Trenton	Hewitt, Robert S.	Dearborn	Ratigan, Carl S.	Dearborn
Broderson, Harvey S.	River Rouge	Hileman, Lee	Ecorse	Renz, Russell H.	South Bend, Ind.
Burgess, Josephus M. (Honorary)	Northville	Hoffmann, Martin H.	Eloise	Robb, Herbert F.	Belleville
Burrows, Howard A.	Dearborn	Holcumb, August A.	Northville	Roberts, Arthur J.	Ecorse
Butterworth, Herman K.	Lincoln Park	Honor, Wm. H.	Wyandotte	Rogers, James D.	Wyandotte
Caraway, James E.	Wayne	Hudson, J. Stewart	Grosse Pointe Village	Root, Chas. T.	Eckerman
Cavell, Roscoe W.	Eloise	Huff, Reginald G.	Wayne	Schendien, A. J.	Melvindale
Chittick, Wm. R. (Emeritus)	San Diego, Calif.	Humphrey, R. C.	Lapeer	Schlacht, George F.	Romulus
Church, Aloysius S.	Eloise	Jennings, Robert M.	Eloise	Schmidt, Milton R.	Trenton
Coan, Glenn L.	Wyandotte	Kehoe, Henry J.	East Detroit	Selaidy, Joseph E.	Northville
Cohen, H. Herbert	Eloise	Kemler, Walter I.	Ecorse	Shebasta, Bessy H.	Eloise
Coolidge, Maria Belle	Grosse Pointe Park	Kern, W. H.	Garden City	Snow, L. W.	Northville
Craig, Henry R.	Eloise	Kernkamp, Ralph	Eloise	Sparling, Harold I.	Northville
Dubin, Joseph J.	Dearborn	Klein, Louis	Nutley, N. J.	Squires, W. H.	Eloise
Ely, Lloyd L.	Grosse Pointe	Knox, Ross M.	Ecorse	Stalker, Hugh	Grosse Pointe
Engel, Earl H.	Wyandotte	Kwasiborski, S. A.	Wyandotte	Stellhorn, M. C.	Grosse Pointe
Erickson, Milton H.	Eloise	Lemmon, Clarence W.	River Rouge	Van Riper, Steven L.	Eloise

Wexford County

Albi, R. W.	Lake City	Holm, Augustus	Leroy	Mills, Robert E.	Boon
Brooks, G. W.	Tustin	Holm, Benton A.	Cadillac	Moore, G. P.	Cadillac
Carrow, J. F.	Marion	Hoover, J. W.	Ewart	Moore, S. C.	Cadillac
Doudna, H. E.	Albany, N. Y.	Laughbaum, T. R.	Lake City	Murphy, Michael R.	Cadillac
Gruber, John F.	Cadillac	McCall, J. H.	Lake City	Purdy, Calvin S.	Buckley
Hager, Ralph	Manton	McManus, Edwin	Mesick	Showalter, Laurence E.	Cadillac
Hendricks, H. V.	Kalkaska	Masselink, H. J.	McBain	Smith, Wallace J.	Cadillac

President's Page

EVERY PHYSICIAN A HEALTH OFFICER

MICHIGAN Medicine and the four thousand members of the Michigan State Medical Society are "on the spot" in their contention that treatment clinics are unnecessary in preventive medical procedures. Clearly, it is up to the physicians of this state to *prove* that the day of treatment clinics is past. Doctors must show Government, whether it be Federal, State or local, that they are able to do preventive medical work, and to handle the problems of syphilis control, tuberculosis control, immunization, and all phases of prevention as part of their own practices.

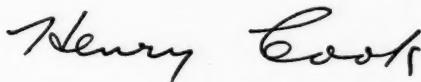
Government is showing a tendency to accept the medical profession's claim. The experiment of "Every Physician A Health Officer" is being tried out, now—at this very moment.

If the medical profession shows proof that it can handle this new field of work, in the practitioner's own office, then the program on the physician-patient basis will be continued and be enlarged.

If the profession does not rise to the occasion, if it throws away this splendid opportunity for greater service to the public, then it can expect to see "bigger and better" clinics, and will have no one to blame but itself for its own lethargy.

Men of Medicine, become *healthmen* in the modern field of preventive medicine.

Respectfully submitted,



President, Michigan State Medical Society.

EDITORIAL

THE JOURNAL OF THE *Michigan State Medical Society*

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MAY, 1938

"Every man owes some of his time to the up-building of the profession to which he belongs."

—THEODORE ROOSEVELT.

EDITORIAL

SULFANILAMIDE

PERHAPS no other drug or medicinal agent has been written about and talked about to the same degree since its introduction less than three years ago, as sulfanilamide. Much as been claimed for it. It has been used to combat almost all kinds of infection with varying degrees of success. Like the proverbial two-edged sword, it has been found potent for harm as well as good. It is not a drug, by any means, for general consumption.

Elsewhere in this number of THE JOURNAL of the Michigan State Medical Society is an interesting presentation of the use of sulfanilamide in infections of the genito-urinary organs. This paper is submitted for publication by and we assume has the endorsement of the North Central Branch

of the American Urological Association. Doctors Breakey and Harrold have made a study of over 200 patients with infections of the upper urinary tract. The group consisted of ambulatory patients, for the most part not under institutional control, who may be considered as representing the patient who presents himself to the private practitioner. The group, two hundred and fourteen, to be exact (see classification, page 425), was studied with a view to ascertaining not only the beneficial effects, but any deleterious results as well. The authors have carefully tabulated the evidences of reaction to the drug. Adverse reactions subsided with the withdrawal of the medication, leaving no permanent untoward effects. Ten per cent of patients receiving sulfanilamide medication were found not to tolerate the drug well, with varying symptoms.

The authors of the paper, while recognizing the untoward symptoms possible, feel that sulfanilamide is very valuable in combating infections of the genito-urinary tract, particularly gonorrhea.

The reader's attention is called to the rather extensive bibliography. We purpose printing during the year a number of papers sponsored and approved by the North Central Branch of the American Urological Association which is represented by the Detroit Branch.

AMERICAN MEDICAL ASSOCIATION SURVEY

PERHAPS the majority of physicians are under the impression that medical care, for those who require it, is being adequately provided. A minority of physicians, among them those who are holding salaried positions, appear to think otherwise, and have so expressed themselves. The object of the survey conducted by the American Medical Association is to ascertain the truth of the matter. Is medical care adequate in the United States?

The agitation for change in the *modus* of medical practice has come for the most part from socially minded writers who have used up much space in lay magazines during the past few years. Little or no demand for change appears to have come from the people at large. Many, when questioned in regard to alleged state or socialized medicine, do not know what the questioner means.

Surveys are apt to be tinctured by bias or

JOUR. M.S.M.S.

EDITORIAL

self interest. The social worker who has come into being of recent years is interested in making a place for himself in the scheme of things. It must not be denied, however, on the other hand that the doctor is also an interested person. We believe, however, that the doctor's long contact and association with not only the indigent sick, but with sick persons who are not indigent, places him in a better position to evaluate the needs of people than anyone more remote. The further fact that the doctor has been accustomed to render service gratis where needed should remove from him the reproach of being motivated by self interest. The traditions of his profession have acted as a sort of *noblesse oblige*.

The survey, the fact-finding part of it, is being left to the county medical society. This is about the only thing that can be done inasmuch as conditions vary with varying localities throughout the United States. Those chosen by county societies to aid in gathering facts will no doubt take the matter seriously, give it plenty of time, and approach the whole subject in a spirit of detachment, so that reliable data may be obtained. Various groups in the community are to be approached and given an opportunity to answer questions in their own language. The correlation of replies and the drawing of conclusions from factual data will be the function of the American Medical Association. The effect of this survey should be to let us know whether we are wrong or right in our impression in regard to the adequacy of medical care; for impressions they are, because no man can get beyond his immediate environment whether he is a general practitioner in the ranks, or a professor of medicine.

EDUCATION BY FORCE

THE *Pennsylvania Medical Journal* calls attention to the difficulties of doting mothers in getting their children to practice music lessons on the violin or piano. "A considerable number of physicians," comments the *Pennsylvania Medical Journal* editorially, "are asked by fond and doting mothers what suggestions they have to make the children practice music lessons on the violin or piano. Many children are not adapted for music, more especially where systematic practicing is concerned. Some parents stand over the child with a strap at each time of practice

and beat the child into submission. By the time the youngster is brought under control at each seance, both the parent and the child are wrecks, mentally and physically. This is one of those household problems that really give much concern to parents, many of whom will do anything to force their offspring to practice music lessons as part of their culture."

The *Pennsylvania Medical Journal* goes on to bolster its position by quoting remarks of a professional musician as follows:

"He'd be a real musician if he would only practice. He's made splendid progress considering his lack of practice." Those words almost say themselves so often have the music teachers said them. 'Lack of interest' would mean the same thing and come nearer explaining the children's hatred of the practice hour.

"We all understand that few of the children learning how to play musical instruments are going to be musicians in the professional meaning of the term, but many of them could learn to play well enough to give pleasure to other people and provide spiritual repose and enjoyment for themselves.

"Playing an instrument is a way of freeing the spirit of the pressure of life. Everybody needs some such outlet, but children do not know what you are talking about when you tell them that.

"To those parents who make great sacrifices to buy pianos and violins and pay for lessons for children who cry and storm and run away at the mention of practice time, my word is, 'Don't. It isn't worth it.' To those whose children show plainly that they can play, but hate the discipline which learning demands, my word is, 'Go ahead.'"

We quite agree with the above musician; by all means, music, if a child takes to it readily. This will also apply to education in other fields. Unless a boy or girl likes school and really takes great satisfaction and enjoyment from it, it is almost time wasted to try to force an "education," for it is attempting the impossible. You may lead a boy to college, but you can't make him think.

CORPORATION PRACTICE OF MEDICINE

THE Medical Society of the District of Columbia has registered an objection to the practice of medicine by the Home Owner's Loan Corporation at Washington. The "Group Hospital Association" has been subsidized by a government gift of \$40,000 for the medical care of 6,000 HOLC employees who are being served by six salaried physicians, contrary to law, preventing the practice of medicine by a corporation. In retaliation to objections from the District of Columbia Medical Society and the American Medical Association, Congressman Scott of Cali-

EDITORIAL

fornia introduced a resolution into Congress on March 28, calling for an investigation into the acts of the American Medical Association, and state and county medical societies, as well as the Medical Society of the District of Columbia.

Further explanation of the situation is well voiced in an address before Congress by Congressman Paul W. Shafer of the third district of Michigan. Congressman Shafer's address is the clearest and most logical example of reasoning that we have read in a long time and it is hoped that every member of the Michigan State Medical Society will peruse this splendid exposition of the subject. It is hardly necessary to go into detail since we publish this address in this number of THE JOURNAL of the Michigan State Medical Society. Congressman Scott's resolution (H. Res. 452), if passed, will affect every practicing physician in the United States. There is no particular objection to investigations. They, however, should not be one-sided. Those who bring charges against organized medicine should also be subject to just as searching an investigation. A bill for investigation of anything, if not based upon fairness to all concerned, is no investigation at all.

So far as we know, there is no law permitting the practice of medicine by lay corporations hiring doctors to do professional work. There have been numerous attempts at such exploitation. However, they have never been sanctioned by law. A vigorous protest is being presented against the attempt being made on the part of the governmental agencies. If governmental agencies are permitted to practice medicine or dentistry, there seems no reason why any other lay group should not enter upon medical practice by hiring doctors to give the actual medical and surgical care which would in time call for advertising campaigns to stimulate business, for such it would become

THE BOTTLE HABIT

"Once again the annual report of the prescription-pricing department of the Lancashire Insurance Committee reveals the inordinate and growing belief of the panel patients of the county in the virtues of the medicine bottle. Twenty years ago, when the number of patients accounted for in the doctors' drug statistical data for the county was about half a million, the number of prescriptions issued was just under a million and a half. Last year some three-quarters of a million patients accounted for about four million prescriptions. The increase in the cost of drugs is even more startling. In 1917 it was

£39,679 (\$198,395), in 1937 it had risen to £137,969 (\$689,845). And if further proof be needed of Lancashire's insistence on having its medicine it is to be found in a column which shows that the average number of prescriptions per person insured has risen in twenty years from 2.91 to 5.24. It is a rate of increase much in excess of that for the country as a whole, and it is hard to account for."—*Manchester Guardian*.

Further comment on panel practice of medicine would be superfluous.

Customer—"You made a mistake in that prescription I gave my mother-in-law. Instead of quinine you used strychnine."

Druggist—"You don't say! Then you owe me 20 cents more."

Mrs. A.—"Jimmie has been in the third grade for two years. I wonder how he will ever get ahead?"

Mr. A.—"Don't know. If he wasn't born with one, he never will."

Boarder—We've had chicken four times this week.
Visitor—Four chickens! This must be a great boarding place!

Boarder—Oh, it was the same chicken.

SOWING AND REAPING

Oh, it may be no sae funny, this scheme o' sowin' debt
If it disna reap a harvest that will see th' bills a' met,
We'll no be hearin' eulogies, bit raither we'll be flayed
When inither generation pays th' debts that we hae made.

Oh! it's nae sae verra funny if yer doin' work that's free,
An' oor government officials drawin' doon their usual fee,
An' pilin' oop expenses, sae that nae man can earn Enough tae pay his taxes or his grocery concern.

We may better keep th' money for oor taxes tae oorsels
An' let th' politicians use th' land that they may seize
Tae cover their expenses, wi' not a penny more Unless they mak a profit an' show a balance o'er.

Dae ye think oor politicians wull hae' th' nerve tae face
Their sons' and daughters' bairns that may be aboot th' place,
An' tae luve them an' tae kiss them an' tickle o' their feet,
When th' biggest thing they've gi'en them, a debt they canna meet?

Noo ah dinna do complainin' mair than any ither maun,
Bit ah'd like tae hae explained tae me th' basis o' th' plan
That pits mair money in yer pouch—oh, how ma hert does yearn
Tae ken that plan that saves ye money by spendin' mair'n ye earn.

WEELUM

JOUR. M.S.M.S.

DEPARTMENT OF SOCIETY ACTIVITY

L. FERNALD FOSTER, M.D., Secretary

THE A.M.A. SURVEY— YOUR OPPORTUNITY!

Objectives:

1. *Diagnosis.* To determine the prevailing medical and preventive medical needs in each county.
2. *Treatment.* To develop preferable procedure to supply the needs where medical and preventive services are insufficient or unavailable.

I. The first phase of the study is fact-finding.

II. The second phase of the study involves the analysis of factual data and the preparation of a report of appropriate methods to meet the needs if at present they are improperly supplied.

III. To insure the highest degree of accuracy and completeness, a sufficient amount of time must be taken on this study. Haste is inconsistent with good scientific and social investigations.

It must not be inferred that it is necessary for all county medical societies to recommend some new procedures. If from the study it appears that medical needs in the county are now being met satisfactorily, it is of as much importance to make a report to that effect as, in other instances, to recommend measures to correct insufficient or unavailable services.

"Every physician a health officer"

GOVERNOR MURPHY'S STATEMENT RE: SURVEY

THE State Welfare Department, the Michigan Department of Health and the Michigan State Medical Society have had frequent conferences relative to the medical needs of welfare, old age and W.P.A. clients.

MAY, 1938.

Quite obviously there is need for additional medical care for many of these people. However, the extent of such needs, the inequalities in distribution of care, and the legal obstacles to providing additional and improved medical care are all subjects for intensive study in order that the problem may be properly solved.

The Michigan State Medical Society already is undertaking such a study. The State of Michigan is desirous of offering its every assistance to the medical group in pursuing this survey. Therefore, I wish to announce the appointment of the following persons as members of a committee to coöperate with a committee ap-

pointed by the State Medical Society and all official and non-official state agencies and departments concerned with this important problem.

Dr. Don W. Gudakunst, State Commissioner of Health.

Mr. James Bryant, Director, State Welfare Department.

Mr. George F. Granger, State FERA.
Nelle Williams, Old Age Assistance Bureau, State Welfare Department.

Dr. Ralph Pino, Detroit.
Dr. Paul Kniskern, Medical Director, Kent County, FERA.

Dr. R. G. Tuck, Medical Director, Oakland County FERA.

Mr. A. N. Hennigar, Detroit Board of Education.
Mr. John Reid, Secretary, Michigan Federation of Labor.

Mr. R. A. Broadbent, Lansing, Michigan Pharmaceutical Assn.

U. G. Rickert, D.D.S., President, Michigan State Dental Society.

Mr. Charles Wennegar, Chrysler Corporation, Detroit.

Mr. Harry J. Kelley, American Seating Company, Grand Rapids.

Mr. Ray Baartz, Detroit Council of Social Agencies.

It is hoped that this committee can not only assist the Medical Society in discover-

ing the facts, but that ways and means can be outlined for the complete utilization of the professional and technical skills now existing in our state for the benefit of our people.

April 6, 1938.

"All medical progress begins with **you**."

M.S.M.S. OBJECTIVES AND ACTIVITIES

II. ECONOMIC:

The Michigan State Medical Society and its component county societies bring you these valuable benefits of membership:

1. Participation in the varied activities of the county and state medical societies—all designed to preserve the physician-patient relationship.
2. Protection against state and national legislation inimical to public interests and advancement of medical science; constructive efforts to initiate beneficial health measures; important contacts to effect the proper administration of existing laws.
3. Defense of your profession and your source of livelihood from encroachments from without.
4. The bulwark of an organized profession in medical-legal matters.
5. Information and action on fraudulent schemes, inferior products, and pseudo-medical practitioners through close coöperation with the State Department of Health, the State Board of Registration in Medicine, and other departments at your State Capitol.
6. Privilege of becoming an active member of the Michigan Health League.
7. Assistance in obtaining appointments as examiner for insurance companies, state departments, and other organizations.
8. Personal service of your Executive Office in Lansing in matters associated with your practice of medicine.

"Every physician a health officer"

UNHEALTHY POLITICALIZATION OF MEDICINE

SENATOR Wagner of New York recently introduced in the United States Senate a resolution providing for the appointment

of a select committee of the Senate to conduct an investigation of medical service in the United States; this appears to be a preliminary to a socialized medicine bill which Mr. Wagner has threatened to introduce.

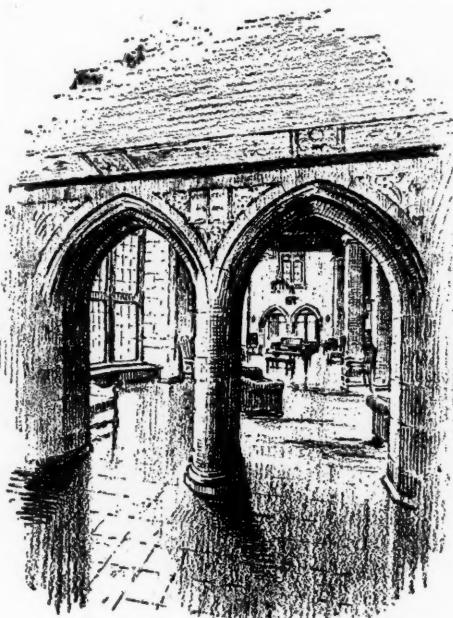
Is Senator Wagner trying to intimidate individual members or groups of physicians to stop fighting against a corporation illegally practicing medicine? Is Senator Wagner et al. attempting to develop a defeatist attitude in the medical profession in order "to divide, and rule"?

Will the Wagner bill, if enacted into law, divide the medical profession as has his N.L.R. Act (designed to *help* labor, not divide it!)? The N.L.R.B. has been dissolving A. F. of L. contracts and ordering new elections in ways that keep the A. F. of L. constantly irritated and more and more averse to an agreement with the C.I.O.

If Senator Wagner's political panaceas cannot work in the economic field, what chance for success (benefit to the people) will they have in the more highly personal field of medicine?

Political meddling in medicine is always disillusioning, if not disastrous, to the people. A physician's responsibility is, first, to warn his patients against the dangers of political medicine; second, to fight in the front-line trenches against any scheme which will deteriorate medical care in this country.

"All medical progress begins with **you**."



SOCIETY ACTIVITY

EXECUTIVE COMMITTEE OF THE COUNCIL

March 13, 1938

HIGHLIGHTS:

1. Governor Murphy offers help to the Michigan State Medical Society in the work of the A.M.A. Survey.
2. Right of employees of state penal institutions to choose their own physicians is reaffirmed and demanded.
3. Request is made for amplification of Attorney General's opinion re interpretation of x-ray plates.
4. The Filter System is made official by the Michigan Crippled Children Commission.
5. The State Society's representatives to the Michigan Health League are appointed.
6. The Gudakunst-Salter series of articles on "Health Factors of Middle Age" are approved for publication in newspapers of the state.
7. Fifty eminent speakers, on annual meeting program in Detroit, September 20, 21, 22, 1938, are approved.

1. *Roll Call.*—The meeting was called to order in the Statler Hotel, Detroit, by Dr. P. R. Urmston at 3:15 P. M. Those present: Drs. Urmston A. S. Brunk, H. R. Carstens, I. W. Greene, P. A. Riley. Also present: Drs. Henry Cook, H. A. Luce, L. Fernald Foster, J. H. Dempster, M. H. Hoffmann, R. H. Holmes, L. G. Christian, L. O. Geib, R. H. Pino, G. C. Penberthy, Health Commissioner Don W. Gudakunst, Drs. C. K. Hasley and H. B. Fenec, and Executive Secretary Wm. J. Burns. Absent: Dr. V. M. Moore.

2. *Minutes.*—The minutes of the meeting of February 9 were read and approved.

3. *Financial Report.*—The financial report for February, 1938, was presented, accepted and ordered placed on file. Bills Payable were presented, and ordered paid on motion of Drs. Carstens-Greene. Carried unanimously.

4. *Report of Contact Committee to Governmental Agencies.*—Drs. Cook and Urmston reported on conferences with Crippled Children Commission on February 15 and March 2 in Lansing. A full discussion ensued relative to the various points, and in particular the filter system.

Recent action of the Commission: An executive order making the filter system official was being considered by the commission.

The Executive Secretary reported on the radiological schedule as presented to the Crippled Children Commission by the Michigan Association of Roentgenologists.

5. *A.M.A. Survey.*—This matter was discussed, and Health Commissioner Gudakunst stated that the Governor would offer help in the study, to survey wards of the state, and reported that the study committee would be composed of representatives of the MSMS, medical directors of the E.R.A., social agencies, Welfare Department, State Health Department, Education, large and small Industry and Labor. Dr. Foster explained the details of the A.M.A. survey, to be medically conducted. Motion of Drs. Greene-Brunk that the Michigan State Medical Society make the official survey as suggested by the American Medical Association. Carried unanimously.

After further discussion, motion was made by Drs. Carstens-Greene that the MSMS Public Relations Committee be instructed to stimulate all necessary study, interpretation and activity on the part of the county medical society. Carried unanimously.

Motion of Drs. Brunk-Carstens that State Health Commissioner Gudakunst be advised that

we wish to contact the Governor re the survey of wards of the state; that the Contact Committee to Governmental Agencies has authority to so contact the Governor and the State Health Commissioner, and to report back to the Executive Committee of The Council. Carried unanimously.

6. *Attorney General's Opinion re Interpretation of X-Ray Plates.*—This matter was presented by Dr. C. K. Hasley for the Michigan Association of Roentgenologists. The matter was thoroughly discussed, and Drs. Dempster and Hasley were requested to draft a letter for presentation to Attorney General Starr.

The letter, as drafted, was presented to the Executive Committee of The Council and approved, with instructions that it be sent to Attorney General Starr, on motion of Drs. Riley-Brunk. Carried unanimously.

7. *Report of Legislative Committee.*—Dr. L. G. Christian, Chairman, reported on the recent meeting of the Legislative Committee. Motion of Drs. Carstens-Riley that the Legislative report be accepted. Carried unanimously.

8. *Investigations of Violations of Medical Practice Acts.*—A report on this matter was presented, and accepted.

9. *Syphilis Control Bill in Congress.*—President Cook reported on this matter, and on his letter to Senator Vandenberg urging that a conservative but ample appropriation should be considered; he read Senator Vandenberg's reply, suggesting that a 3-year appropriation, to give the experiment time to prove itself, was sufficient.

10. *Michigan Society for Mental Hygiene.*—President Cook spoke of the meeting of April 8, which was thoroughly discussed. No action taken.

11. *Civil Service Commission.*—The matter of the Civil Service Commission's proposed examination of prospective state employes, by which physicians in penal institutions might be required, according to the instruction sheet, to furnish medical care to prison employes, was discussed. Motion of Drs. Carstens-Brunk that a letter be written to the Civil Service Commission reaffirming the position of the MSMS that physicians employed by penal institutions shall not furnish medical service to employes, thereby depriving these citizens of the right of choosing their own physician. Carried unanimously.

12. *Parole Commission.*—Dr. Riley, as Chairman of the Contact Committee with Parole Commission, reported that his committee had transmitted its decisions re consultation service and fees there-

SOCIETY ACTIVITY

- for to the Parole Commission; the Parole Commission had discussed this matter in Jackson on January 25 and had referred the matter to the Civil Service Commission. Motion of Drs. Brunk-Carstens that the report be accepted. Carried unanimously.
13. *Committee on Scientific Work.*—Dr. Foster reported on the February 20 meeting of this committee. He stated that the 1938 annual meeting would begin as usual with a House of Delegates' Breakfast, and continue with many activities and fifty speakers until Thursday afternoon at 5:00 p. m., September 22, 1938. The suggestion that the Ear, Nose and Throat section have a section meeting all day Wednesday was not looked upon favorably by the Executive Committee of the Council.
- Motion of Drs. Carstens-Brunk that the report of the Committee on Scientific Work be accepted, including its recommendation that only one-half day (Wednesday, September 21) be devoted to section meetings. Carried unanimously.
14. *Michigan Health League.*—Dr. Christian reported on the formation of the League and the approval of its Constitution and By-Laws, which was referred back to the Executive Committee of the Council of the M.S.M.S. for its approval. Motion of Drs. Carstens-Brunk that a copy of the constitution of the League be sent to each member of the Executive Committee, with the request that he study same, write his comments to Chairman Urmston and Secretary Foster, who shall combine the various suggestions, with power to act. Carried unanimously. Motion of Drs. Carstens-Greene that the M.S.M.S. contribute its contribution of \$50.00 to the Michigan Health League, at this time. Carried unanimously.
- Motion of Drs. Greene-Riley that the present nominations to the Health League (Drs. Christian, Gruber, Tuck) be approved by the Executive Committee of the Council. Carried unanimously.
- Motion of Drs. Riley-Brunk that the three representatives of the Michigan State Medical Society to the Health League use their influence to see that the M.S.M.S. Legislative Committee Chairman be made a member of the Executive Committee of the League. Carried unanimously.
15. *Report of Medico-Legal Committee.*—The monthly report, as presented by Secretary Wm. J. Stapleton, Jr., was read, and accepted on motion of Drs. Brunk-Carstens. Carried unanimously.
- Dr. Carstens spoke of the report of the Secretaries' Conference held at the A.M.A. in Chicago last November re what other states are doing in medico-legal work. Motion of Drs. Carstens-Greene that this be referred to a committee for study and report. Carried unanimously.
- Committee appointed: Drs. Greene, Holmes, Andrews.
16. *Title "Dr." Used by Chiropractors.*—A recent opinion of the Attorney General denying chiropractors the right to practice medicine or use the title "Doctor" was read.
17. *Report of Cancer Committee.*—Report of the meeting of March 12 was presented, received, and placed on file. It was suggested that the doctor's small leaflet re cancer might be published in the JOURNAL, to save expense.
18. *Northwest Conference.*—President Cook and Secretary Foster reported on the meeting of the Northwest Conference in Chicago on February 13. Dr. Foster suggested improvements in the form of organization of this association. Motion of Drs. Carstens-Brunk that the Secretary's suggestion meets with the approval of the Executive Committee of The Council. Carried unanimously.
19. *Postgraduate Courses.*—Secretary Foster reported on the individual postgraduate courses in obstetrics, which the State Department of Health is trying to arrange at the present time.
20. *From the Wayne County Medical Society.*—(a) Suggestion to discontinue o.p.d. fees under the Afflicted Child Act. This was discussed, and the Executive Committee instructed the Executive Secretary to ask for specific and detailed information from the Wayne County Medical Society, in order that it may proceed with any necessary investigation.
- (b) That the state help to remove 3,000 state mental cases from Eloise Hospital to make room for Wayne County Medical cases now housed inadequately in Receiving Hospital, Detroit. This was discussed generally, and the Executive Committee deplored the present conditions. However, the Governor is gradually relieving the situation, as more room is being made at Ypsilanti.
21. *"Health Factors of Middle Age."*—The Executive Committee discussed the reprinting of this series of articles, written by Dr. D. W. Gudakunst and Lawrence C. Salter, for all the small newspapers of the state, under the sponsorship of the M.S.M.S., the State Department of Health, and the Joint Committee on Health Education. Motion of Drs. Brunk-Riley that this be approved. Carried unanimously.
22. Adjournment.—The meeting was adjourned at 11:25 p. m.

SEE STARS—HEAR STARS—SEPTEMBER MEETING

A constellation of medical stars will make brilliant the 1938 annual meeting of the Michigan State Medical Society, in Detroit, September 20, 21, 22. Twenty-seven guest speakers from all parts of the country and abroad will be featured on the General Assemblies; a like number of Michigan teachers and lecturers will be presented on the section programs. Among the acceptances of out-of-state speakers, to date, are:

C. A. Aldrich, M.D., Winnetka, Ill.
 Joseph Baer, M.D., Chicago, Ill.
 O. B. Batson, M.D., Philadelphia, Pa.
 Henry A. Christian, M.D., Boston, Mass.
 Franklin G. Ebaugh, M.D., Denver, Colo.
 Haven Emerson, M.D., New York, N. Y.
 Morris Fishbein, M.D., Chicago, Ill.
 Howard Fox, M.D., New York, N. Y.
 John Gordon, M.D., Boston, Mass.
 Roy R. Grinker, M.D., Chicago, Ill.

Henry F. Helmholz, M.D., Rochester, Minn.
 Harold O. Jones, M.D., Chicago, Ill.
 Frank H. Lahey, M.D., Boston, Mass.
 William D. McNally, M.D., Chicago, Ill.
 F. W. Rankin, M.D., Lexington, Ky.
 A. D. Ruedemann, M.D., Cleveland, Ohio
 Kellogg Speed, M.D., Chicago, Ill.
 Fred Taussig, M.D., St. Louis, Mo.
 A. F. Voshell, M.D., Baltimore, Md.

SOCIETY ACTIVITY

CONGRESSMAN SHAFER (MICH.) FIGHTS SOCIALIZED MEDICINE

[The following address was made by Congressman Paul W. Shafer of Battle Creek, Michigan, in the U. S. House of Representatives, Washington, D. C., on March 29, 1938]*

A resolution has been introduced in the Congress—Monday, March 28—by the gentleman from California [Mr. Scott] calling for an investigation into the activities of the American Medical Association, State and county societies, and the District of Columbia Medical Society.

This resolution is the outgrowth of a controversy between the Group Health Association—originated to provide medical care for employees of the Home Owners' Loan Corporation—and the Medical Society of the District of Columbia.

In connection with this controversy, the gentleman from California has made several serious charges on the floor of this House which have been given wide publicity. These include charges of unethical practice by members of the District of Columbia Medical Society and the accusation that members of the society are conspiring to create a monopoly of the practice of medicine, on their own terms, in Washington hospitals. My interest in the controversy is explained by the fact that I am a member of the Subcommittee on Hospitals and Charities of the Committee of the District of Columbia, and inasmuch as these charges involve hospitals in the District of Columbia, I have felt it my duty to investigate the accusations. I have made a cursory investigation on my own initiative and I take the floor today to advise the membership of my findings.

I might observe at this point that the results of my personal inquiry show that if an investigation resolution is adopted, it should also provide for an investigation of the G. H. A.—Group Health Association—as well as the Medical Society. In fact, if the resolution presented by the gentleman from California is adopted without including the G. H. A. in the investigation, I shall introduce a similar resolution to bring the G. H. A. under the scope of the investigation.

From my findings I have no doubt but that an investigation into the activities of the Medical Society of the District of Columbia would vindicate that organization and its members of unethical conduct. In fact, I have learned that the members of the District of Columbia Medical Society are as anxious that this investigation be held as its proponents, in order that the loose accusations, and the implanting in the public mind of doubts as to the high morals and ethics of the members of the society, may be disproved.

In connection with his resolution the gentleman from California made the statement that—

The District Medical Society is doing everything it can to break up the G. H. A. movement and is receiving assistance from the American Medical Association.

The fact is, the Medical Society has done nothing of the sort. When the G. H. A. was originally organized to provide adequate medical care for employees of the H. O. L. C. and other Government employees, the District Medical Society offered its cooperation to help provide this medical care. The offer was made in good faith, with but one proviso, that being that the program to be worked out could not violate the legal, ethical, and professional standards of the society.

*Acknowledgment is made to the *Congressional Record* for permission to reprint this address, which is exempt from the copyright provisions of the M.S.M.S. JOURNAL.

"Medical Ethics" Defined

By way of explanation I might state that these standards of the Medical Society were not conjured overnight by any group of laymen. They are self-imposed limitations upon the medical profession for the protection of the public, built up as a result of practical and costly experiences over three centuries of medical practice.

The G. H. A., however, insisted that the society provide medical service for this organization on G. H. A.'s own terms, which the medical society found impossible. If the G. H. A. felt those standards were correct, and the medical society was wrong, it certainly had the right to insist upon them; but, by the same token, the medical society hardly could be expected to abandon its own principles in order to comply with the ultimatum of the G. H. A.

The points in conflict were:

First. That the program must be legal.

Second. That it must be economically sound, so that the quality of service rendered could not be sacrificed in order to render the service at a reduced rate.

As to the economical soundness of this program these facts should be noted:

Quality Service Suffers

In any program of this kind the primary purpose is to render medical service at a reduced cost. The objective is to give the individual the same amount of medical care that is received by persons of comfortable circumstances but at a reduced rate. In order to do that a sacrifice has to be made in one of two places. Either the physician who handles this type of work must receive less income or his income must be made up by a larger number of patients, which means less time and less attention to each individual.

The fallacy of the Group Health Association program is that all of this sacrifice for 6,000 members is concentrated on six physicians. In order to pay the salaries of the six doctors it has been necessary to admit more and more members to the association and to cut down heavily on the amount of time and attention available for each patient.

Had this program provided for free choice of physician, the sacrifice would have been spread over hundreds of physicians in the city of Washington. (A total of 1,979 physicians.) Each one could have afforded to handle his share of this practice at a reduced rate and still give the usual time and attention to the patient.

For six physicians to purport to give complete and unlimited medical attention to 6,000 individuals—a thousand persons for every doctor—is plainly impossible. Actual results show that. Just as the past experience of the medical society indicated, the physicians of Group Health Association have been more and more overburdened with work. There are many cases having to wait for long periods before receiving attention.

Illegal Practice by a Corporation

As to the legal phase:

A government gift of \$40,000, necessary in order for G. H. A. to begin operations at all, was held by the Comptroller General and the House Appropriations Committee to have been illegal and improper.

The Healing Arts Act of the District of Columbia makes it unlawful for any corporation to practice medicine. There are many reasons for this, but, regardless of the reasons, the law is on the books. The medical society received a formal legal opinion from its counsel that Group Health Association is a corporation engaged in the practice of medicine in violation of the healing-arts law.

SOCIETY ACTIVITY

The United States district attorney here also has ruled the same way.

The corporation counsel has ruled that Group Health Association is operating in violation of the insurance laws of the District of Columbia. Group Health Association has requested a declaratory judgment from the local courts on those two points in the hope of overruling these adverse decisions, but so far such judgments have not been handed down.

One of the requirements for membership in the medical society of the District of Columbia is that the physician must be engaged in legal practice of medicine. The same eligibility requirement is maintained by all hospitals in the District of Columbia. Plainly, such a requirement is necessary. The District Medical Society has no more right to permit a physician of Group Health Association to be a member of the society in good standing under these rulings than it would have to permit some physician who is guilty of criminal practice to retain his membership. The hospitals are in an identical position.

Group Health Association Physicians Engaged in Illegal Practice

In short, the physicians of Group Health Association are engaged in illegal practice, and the hospitals or the Medical Society would be compounding this violation of law by having professional relationships with these physicians.

Among the many reasons why corporation practice of medicine is held to be inimical to the public interest is the fact that any such corporation set up for commercial marketing of medical service tends to wipe out the fundamental essential of good medical care—the personal attention and interest by the physician to the individual patient.

If medicine were a completed science in which symptoms could be dialed into a computing machine—a crank turned—and a box of the proper pills discharged from a slot, the considerations might be different. This, however, is not the case. Medicine is only an infant science. The eccentricities, peculiarities, and individual factors in human beings make every diagnosis and treatment dependent very heavily on personal deduction, allowances for this and that, and careful reasoning by the physician.

Disastrous Results to Public

Another objection to the corporation practice of medicine is that where medical service becomes a medium of profit by a corporation with lay stockholders interested primarily in whether the corporation pays dividends or not, the results to the public are disastrous.

In this connection, fancy the outcome if several large corporations were set up in the District of Columbia to sell medical care to the public. In commercial competition with each other, their objective would be to compete for membership and to get as many paying members as possible to increase the total of business. It is not inconceivable that door-to-door solicitors might be calling upon housewives like Fuller Brush salesmen, to sell memberships. With salesmanship their only interest, the method of sale, of course, would be to build up fear in the individual's mind and thereby show the value of this service. It is a physical fact that such a practice as this probably would have dire effects on the general public welfare. Fear, imagination, and similar emotions are closely tied to the physical health of any individual.

The present controversy was begun by the Group Health Association when one of its members was refused admittance to a district hospital (Garfield) when it was ascertained by hospital authorities that

emergency surgery was not needed. The patient later underwent an operation at another hospital (Columbia).

Speaking on the floor of the House, the gentleman from California [Mr. Scott] made the following statement:

A certain woman is a secretary in one of the Government departments. She belongs to the Group Health Association. She went to the hospital, being sent there after examination by a physician employed by the Group Health Association. He sent her to the hospital with a diagnosis of appendicitis. The doctor who sent her there was Dr. Selders of the Group Health Association clinic. She was admitted to the hospital and made ready for the operation. Doctors and attendant nurses had dressed themselves in preparation for the operation and morphine was administered to her by an employee of the hospital, and then the question was raised by the resident physician whether or not Dr. Selders was to be permitted to operate on this young woman. The resident physician said, "No; he is employed by the Group Health Association and cannot operate in this hospital."

The young woman refused to accept any other doctor and said, "Dr. Selders has taken care of me. He knows my condition and I want him to operate on me because I have confidence in him."

They would not allow this, and thereupon the superintendent of the hospital refused to allow the operation to proceed. The resident physician, without consultation with other medical authorities, declared the case was not an emergency case, going on record to that effect in writing, and the girl was taken out of the hospital. This despite the fact that G. H. A. patients are let into hospitals only in emergency cases, and even then not all the hospitals will take emergency cases.

Forty-eight hours later the young woman was operated upon by another physician in another hospital, and it was found at that time her appendix had ruptured. The resident physician in the first hospital would not let her be operated upon because she wanted her own doctor, said it was not an emergency case, and sent her out of the hospital after an employee of the hospital itself had injected morphine into her in preparation for the operation. What might have happened did not happen, because she lived. The operation was successful. (Pp. 5135, 5136, *Congressional Record*.)

My personal investigation shows that the circumstances stated in connection with this case are not based on fact. The patient never entered the operating room at the hospital. Dr. Selders knew in advance that the only grounds under which he might be accorded surgical privileges at this hospital—Garfield—was for emergency surgery. He took the patient to the hospital and claimed she was suffering from acute appendicitis and that an emergency operation was necessary. Documentary evidence shows that the patient was examined by the hospital physicians who found she did not have an acute appendix, and that an emergency operation was not necessary. They refused to permit the operation but offered to call any surgeon the patient might request. The patient did insist upon Dr. Selder's performing the operation and finally left the hospital. Two days later she was operated upon at another hospital—Columbia—by a recognized physician of that hospital's staff.

Documentary evidence from the surgeon who performed the operation and from the pathologist who examined the appendix shows that the appendix had not ruptured and that the patient did not have acute appendicitis. I have here an attested copy of a letter written by Truman Abbe, M.D., the surgeon who performed the operation, addressed to Dr. Thomas E. Neill, President of the Medical Society of the District of Columbia. The letter reads:

DEAR DR. NEILL: In response to your request for information about the condition of the appendix from the patient of the G. H. A. upon whom I operated on March 1, 1938, I have asked her permission to report to you (for public information, if necessary) that I found no acute condition in the abdomen, and that the pathologist's report on the appendix was "chronic appendicitis."

Sincerely yours,

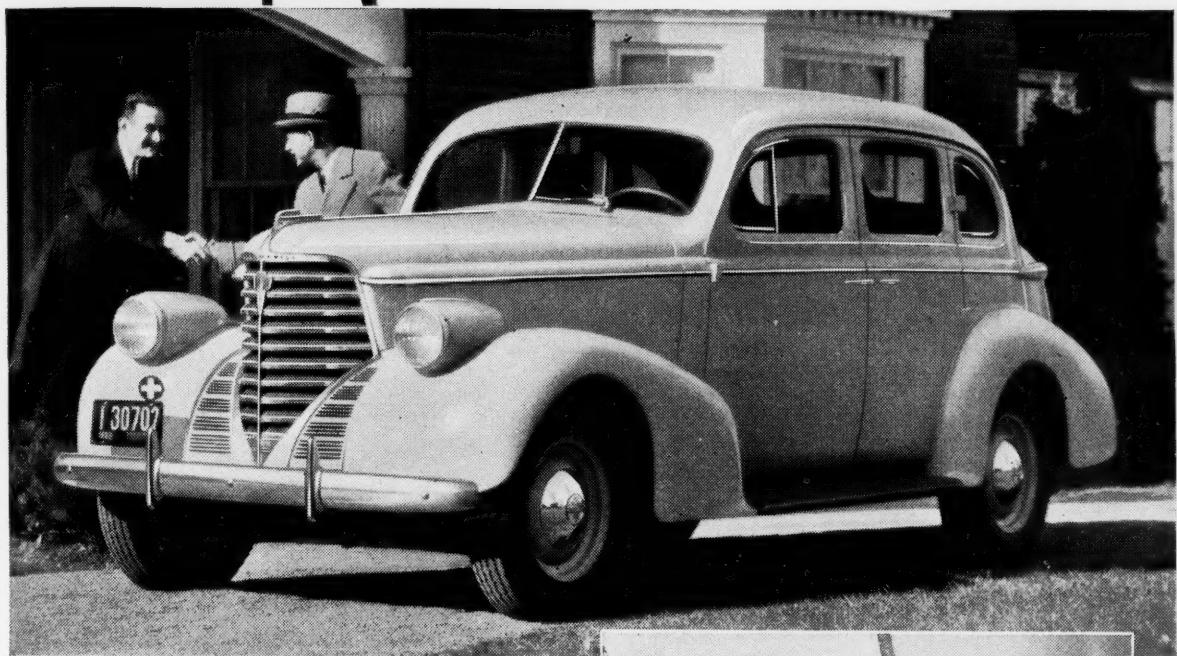
TRUMAN ABBE.

In view of these facts, it would appear that Dr. Selders, the G.H.A. physician was guilty of one of two things in this case. Either he was woefully mis-

(Continued on Page 456)

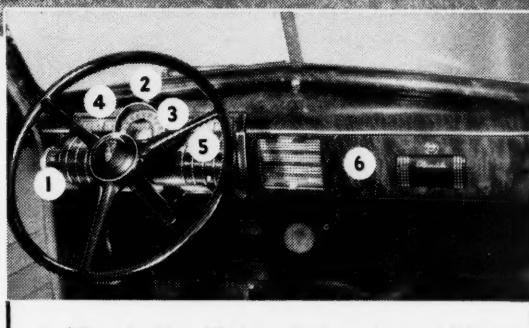


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(Continued from Page 454)

taken in his diagnosis of the woman's illness, or he deliberately attempted to force his way into the hospital under false pretenses.

If it was an honest mistake, it seems to indicate that the hospitals of the city of Washington are justified in refusing him permission to operate on the grounds of professional capability, as well as on the grounds that he is engaged in illegal practice. If it was a case of false pretenses, it is a sad reflection on the ethics and integrity of Dr. Selders and the G.H.A., that any patient should be deliberately subjected to the mental stress here involved and used as a tool of trickery.

In accusations of this kind it is better to have the facts established immediately than to allow the medical profession to be exposed to such loose charges. I have no doubt that an investigation would vindicate members of the District of Columbia Medical Society completely and for that reason I would support the resolution of the gentleman from California if it were not national in scope. I regard this controversy as a purely local situation, as I stated before, and I see no reason for extending this proposed inquiry beyond the borders of the District. I am at all times ready to favor an investigation into charges against the medical profession or any of its reputable members because I believe that, except perhaps in isolated cases, such charges are idle gossip which would be disproved by an orderly investigation, and because I believe the medical profession is too important, its ideals are too fine, its service to humanity is too great, and its necessity to human welfare is too vital to allow it to be rendered suspect. I believe the members of the District of Columbia Medical Society, whose conduct has been brought into question, should be given a full opportunity to establish, in an orderly and convincing way, the falsity of these charges.

COUNCIL AND COMMITTEE MEETINGS

1. Thursday, March 24, 1938—Mental Hygiene Committee—Eloise Hospital, Eloise—7:30 p. m.
2. Saturday, April 2, 1938—Medico-Legal Committee—David Whitney Building, Detroit—12:00 noon.
3. Wednesday, April 13, 1938—Liaison Committee with Hospital Association—Wayne County Medical Society Building, Detroit—4:00 p. m.
4. Thursday, April 14, 1938—Executive Committee of The Council—State Health Department Laboratories, Lansing—2:00 p. m.
5. Wednesday, April 20, 1938—Committee on Post-graduate Medical Education—Wayne County Medical Society Building, Detroit—2:00 p. m.
6. Thursday, May 5, 1938—Advisory Committee to Woman's Auxiliary—Hotel Olds, Lansing—6:00 p. m.
7. Wednesday, May 18, 1938—Executive Committee of The Council, Liaison Committee with Hospital Association, and Trustees of Mich. Hospital Association—Eloise Hospital, Eloise—2:00 p. m.

What County Medical Societies Are Doing

JACKSON'S SYPHILIS CONTROL PROGRAM

By EDWARD D. CROWLEY, M.D., Jackson

THE Jackson Academy of Medicine and Dentistry has a contract with the Board of Supervisors of Jackson County to supply medical care to indigent patients in the venereal disease group for a stipulated sum. Patients can go to the physician of their own choice, and adequate treatment is guaranteed.

Treatment is followed according to the specifications laid down by the Michigan Department of Health.

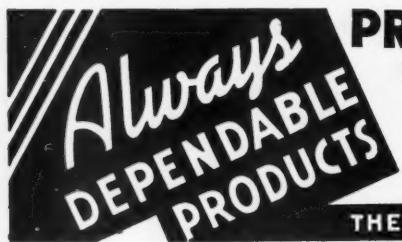
The routine that is carried out in Jackson County is as follows: When a positive Kahn or G. C. smear is obtained on an indigent case, this case is referred to our Poor Commissioner so that he will guarantee that the case is really indigent. After this approval is obtained, the patient returns the card, signed by the Poor Commissioner, to the doctor, who in turn reports the case to the secretary of the Academy. Treatment is then started, and each treatment is recorded by the physician on a special chart. After two months these treatment charts are returned to the secretary of the Academy; in this manner careful check is made that the treatment is being adequately carried out. This chart is signed by the patient, as well as by the M.D. If a case is delinquent two treatments, another card is sent to the secretary, who in turn reports to the Board of Health, and this case is immediately followed up and requested to return to his physician for treatment. Kahns are required four times a year, and gonorrhea smears must conform to the State regulations before a case of gonorrhea is discharged.

We find that this type of follow-up of cases is very effective in having these patients continue their treatments. It is working very satisfactorily in Jackson. We have splendid coöperation from the Board of Health, and this is what makes the plan effective.

The contract that we have with the Supervisors pays the physician approximately \$50.00 a year for the treatment of syphilis, and \$30.00 for the treatment of gonorrhea. The fee that is paid to the physician for these cases is, on a sliding scale, according to treatment given. All medication is furnished free by the State.

This program maintains the physician-patient contact, where before these patients were treated in the clinics.

Any questions in regard to a more detailed operation of our plan will be gladly answered by corresponding with the secretary.



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Sec.-Treas.—Mrs. J. W. Page, 119 N. Wisner St., Jackson, Michigan
Press—Mrs. C. B. Fulkerson, 1535 Grand Ave., Kalamazoo, Michigan

A MESSAGE FROM THE PRESIDENT

As each Auxiliary is planning to close the program for the year, the days are full of duties for all lest we be not able to enjoy the recess so near at hand.

Mrs. Page and I have enjoyed the courtesies extended to us as we have accepted invitations to attend meetings. Of course Bay County came first, then Ingham County, January 24, where we heard Dr. Clara Davis, speak of her conclusive ideas regarding food for children and the psychological influence of the day in character building. It was a real pleasure to chat with Dr. Davis, Mrs. Vanderzalm and other members at tea.

On March 25 we were in Saginaw accompanied by Mrs. Peterson as house guests of Mrs. L. C. Harvie at her lovely new home attending the joint meeting of Bay and Saginaw Counties. A delightful program was planned and I can recommend Miss O'Brien, Dr. O'Brien's daughter, as a speaker on "What is New to Read," also Mrs. Hutchinson and her beautiful selection on the harp. Then to Lapeer for dinner, and to organize that night.

On April 8 at the Wayne County Meeting to make plans for the State meeting with Mrs. A. O. Brown, convention chairman, and Mrs. Bookmeier, co-chairman, also Mrs. Whitney and Mrs. Geib. We were fascinated by the profusion of flowers and the gorgeous arrangement of bouquets following the talk on "Gardens and Health" by Professor Paul R. Krome of the Michigan State College, and then a cup of tea.

On April 13 we met Dr. Collisi, Advisory Council chairman, to discuss matters of business and plans for the convention, and attended Kent County's program at Mrs. Leon DeVel's home, after which we were refreshed with a cup of tea before leaving for home.

On April 22 I am happy and proud to announce Washtenaw County organized at a luncheon meeting held at the League.

This county with Lapeer and Fremont will add greatly to our membership and strengthen our State Auxiliary. Thanks to organization Chairman, Mrs. Henry Pyle, and those who preceded her, also the County Medical Societies for their interest.

On May 3 we join the guests of the Calhoun County Auxiliary for luncheon at the Country Club in Battle Creek.

I am happy to share the memories and anticipation of these meetings with you as members of the Auxiliary.

With the usual promptness of the board members in submitting reports for the year, I am sure to have my state report to Mrs. Keck on time, and then complete arrangements to be your delegate at the national meeting in San Francisco from June 13 to 17.

May I urge all doctors' wives in the state to plan to attend the state meeting, as all general sessions are open. Our program will be announced in the July issue of *THE JOURNAL*.

I will include the article to be printed in supplement to the *California State Journal* as a courtesy for delegates to the national meeting. I could not include all activities of all auxiliaries so selected and placed those which might be of most value to other states. I hope you will approve.

The Nominating Committee has been appointed as follows: Mrs. L. C. Harvie, Chairman, Mrs. E. S. Peterson, and Mrs. Ledru Geib.

If you have names for new officers, please send them to Mrs. Harvie.

MRS. G. C. HICKS,
President Woman's Auxiliary.

Ingham County

The Woman's Auxiliary gave a dessert bridge in March at the home of Mrs. T. I. Bauer, Wildwood Drive, East Lansing. A St. Patrick's Day motif was carried out in decorations of spring flowers and tapers. Four prizes were won, and a door prize and traveling prize were also presented. The committee in charge was Mrs. R. E. Loree, Mrs. William Cameron, Mrs. Fred Huntley and Mrs. H. A. Miller.

MRS. P. C. STRAUSS,
Press Chairman.

Eaton County

After the regular March business meeting of the Auxiliary, Miss Cooper and Miss Cox, nurses from the W. K. Kellogg Foundation, were introduced. Miss Cooper gave a very interesting and instructive talk on the work that will be done by the Eaton County Nursing Clinic. She explained that it will be an out-patient service from the Hayes-Green Hospital obtainable by anyone through his own doctor. The service will be in operation after April 15.

Members of the Auxiliary brought gifts for a layette which were very gratefully received by the nurses. The project started by the Auxiliary of giving to the Nursing Clinic will be continued each month.

Wayne County

On January 12, the Woman's Auxiliary sponsored a "Bring Your Husband Dinner" at the Wardell Hotel. The revival of this dinner met with hearty response as there were one hundred and fifty present. We were most fortunate in having as our honored guest speaker, Mrs. Augustus S. Kech, president of the American Medical Association Auxiliary.

The regular January meeting was held on Friday, January 14, at the medical society headquarters. Dr. Milton Simpson, Professor of Literature at Kalamazoo College, spoke on "The Relation of the Physician to Literature," and referred to the many literary books written by doctors and about doctors. Following the program, tea was served. In February, our social chairman, Mrs. Galen B. Ohmart, and our program chairman, Mrs. Alexander Cruikshank, arranged a luncheon and musicale at the Colony Town Club. Our Ways and Means Committee, Mrs. Richard B. Connelly, chairman, arranged a Floral Bridge Tea on February 18, to raise funds to supply all the Wayne County Schools with *Hygeia*. Cut and potted flowers were displayed all through the club house and were auctioned off by Dr. Martin Hoffman. The committee reported that \$135 had been cleared.

The regular monthly meeting was held on March 11. Due to the absence of our president, Mrs. Roger V. Walker, the first vice president, Mrs. Ledru O. Geib presided. Dr. Maude Watson, director of the Children's Fund of Michigan, was our guest speaker. Her subject was "What Has Mental Hygiene to Contribute to the Intelligent Handling of Children?"

IN MEMORIAM

Tea was served in the lounge with Mrs. Herman Scarney and Mrs. Wadsworth Warren as hostesses.

HELEN R. DOUB,
Press Chairman.

Monroe County

The Woman's Auxiliary met for a joint meeting with the Monroe County Medical Society on March 17. Following the dinner a lecture on "The Fads and Quackery in Cosmetics" was given by Dr. Warren Babcock of Grace Hospital, Detroit. The lecture was public and was followed by his showing a series of colored slides provided by the A.M.A.

(MRS. VINCENT) MARTHA BAKER,
Press Chairman.

Kent County

On February 9 at the regular monthly meeting of the Woman's Auxiliary, Dr. John Lavan, the Health Officer, gave a lecture on "Food Handling Facts." He explained the Food Ordinance, discussing the compulsory health examinations, the laws of sterilizing china and glassware in eating places, and the manner of assigning the red, blue and gold stars to restaurants.

Dr. Wm. J. Butler was the speaker at the meeting March 9. His subject was "Venereal Disease Problems." On March 29, the auxiliary coöperated with the Woman's Field Army of the American Society for the Control of Cancer in giving a benefit bridge to raise money so that a free lecture can be given to the people of this county. The women gave splendid coöperation to this project.

(MRS. ROBERT) MIRIAM ADAMS EATON,
Press Chairman.

Kalamazoo County

Mrs. John MacGregor entertained the Auxiliary in her beautiful new home at Parchment on March 15. Thirty-three members and two guests were present. The guests enjoyed being shown through the attractive rooms whose beauty had been added to by the presence of roses and spring flowers arranged in lovely bouquets.

After a bountiful coöperative dinner a short business meeting was held. Mrs. Lang announced that our society had been chosen to sponsor the local programs for National Cancer Week and Mrs. Jennings had been appointed to take charge of the activities.

The later evening was spent informally.

(MRS. HUGO) BARBARA AACH,
Publicity Chairman.

Jackson County

The regular meeting of the Women's Auxiliary was held Tuesday evening, March 15, at the home of Mrs. Frank Gibson, 2053 Wildwood Lane. A 6:30 dinner was served to the members present by a committee composed of Mesdames Corwin, Clark and John Wholihan, co-chairmen, John Van Schoick, C. D. Munro, M. N. Stewart and E. O. Leahy.

The president, Mrs. Ludwick, conducted a short business meeting, at which time it was reported that the money for our year's project has been more than raised. A petition was circulated and signed favoring a bill that April be declared National Cancer Control month.

A report from the nominating committee, composed of Mesdames Bullen, Clark and Hurley was read.

Mrs. Page, program chairman, then introduced the speaker of the evening, Miss Elizabeth Camburn. Her subject was "The Story of a Pioneer," the life of Dr. Anna Howard Shaw. Dr. Shaw, born in England, came to this country at a very early age,

and grew up to young womanhood in a log cabin in Michigan. During the World War, she was called to Washington, and from there organized the women of the United States to service, such as that of the Red Cross. She became one of the most distinguished women of this country. In her we had a reformer who was extraordinarily sane and tolerant. She was about five feet in height, had snow white hair, beautiful dark eyes, and looked most charming in her pulpit robes.

ANNA HYDE SHAEFFER,
Press Chairman.

IN MEMORIAM

Daniel Waldo Fenton, M.D.

Dr. Daniel Waldo Fenton of Reading, Michigan, died on January 7, 1938, of chronic myocarditis. Dr. Fenton was dean of the medical profession in Hillsdale County. He was born in Delaware County, Ohio, in 1848, and attended school in Galena, Ohio, and Fremont, Indiana. After studying medicine at the University of Michigan for two years, Dr. Fenton transferred to the Detroit College of Medicine, where he received his degree in 1876. He began practice in Angola, Indiana, the same year, and therefore had been practicing medicine for sixty-two years. In 1887, Dr. Fenton located at Reading, Michigan. Dr. Fenton served as Secretary-Treasurer of the Hillsdale County Medical Society for eighteen years. He was elected President Emeritus of the Hillsdale County Medical Society in 1937, and he was a member emeritus of the Michigan State Medical Society, 1937, and fellow of the American Medical Association. Dr. Fenton is survived by his daughter, Hazel Fenton Schermerhorn, his brother-in-law, John Thompson, and several cousins.

Dr. Lewis S. Potter

Dr. Lewis S. Potter died on April 19, at his home in Detroit following a brief illness. He was born at Maidstone, Ontario, forty-eight years ago, and lived in Detroit for thirty-one years. Dr. Potter was graduated from the Detroit College of Medicine, and for many years was a staff member of Providence Hospital. He is survived by his wife, Agnes, a daughter, Betty, and three sons, George, William and Theodore, also three brothers, Dr. Andrew, Dr. Willis and Fred Potter, and two sisters, Mrs. Fred Whitman and Mrs. William Hyland.

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MICHIGAN'S DEPARTMENT OF HEALTH

MICHIGAN'S DEPARTMENT OF HEALTH

DON W. GUDAKUNST, M.D., Commissioner
LANSING, MICHIGAN

SMALLPOX

Smallpox continues to spread in the state, occurring with considerable frequency in new localities. The total number of cases this year has been relatively small, although the incidence since January 1 is considerably more than for several years. Many of the cases have been so very mild and the lesions so few that either a physician has not been called or the disease has been overlooked. This has occurred in a number of communities so that cases have existed for several weeks and numerous exposures have occurred before the disease was discovered. Thus it has spread to many different localities, having occurred since January 1 in the following counties: Alger, Berrien, Branch, Calhoun, Dickinson, Genesee, Gogebic, Houghton, Iron, Kent, Marquette, Menominee, Monroe, Oakland, Ogemaw, Ontonagon, Ottawa, Washtenaw and Wayne.

TO SURVEY MICHIGAN'S HEALTH SERVICES

Michigan's state and local health organizations, both official and voluntary, will be surveyed by the State Health Studies Committee of the American Public Health Association under the direction of Dr. Carl E. Buck, field director.

The survey had been requested by Governor Frank Murphy and Dr. Don W. Gudakunst. Dr. Buck expects to begin his study in Michigan about June 1. He will be assisted by Dr. G. F. Amyot, adminis-

trative associate. Survey offices will be maintained in Lansing.

Scope of the survey will include an analysis of health services now being carried on by the State Department of Health, other state departments carrying on health activities, local health departments, educational institutions and voluntary health agencies. Gaps in Michigan's health program will be analyzed and recommendations made to meet these needs.

The survey will be made without cost to Michigan. The selection of Michigan as the next state to be studied was voted by the recent session of the A.P.H.A. committee in New York. Florida will be the next state to be surveyed following the Michigan study.

WEIL'S DISEASE

Outbreaks of epidemic jaundice appear to be more numerous during the last year than in previous times. It is true that we have had knowledge of such outbreaks during at least the last two generations. Little attention has been given to this disease by public health workers. Outbreaks of what appear to be a communicable form of jaundice have occurred during the last year in the following Michigan localities: Antrim, Berrien, Oakland, Ionia, Clinton, Jackson, Washtenaw and Monroe Counties, and the City of Detroit.

Little of the epidemiology has been worked out in connection with these outbreaks. The etiology has not been proved except in two or three instances. The specific cause of epidemic jaundice about which we know something is the same as that of Weil's disease, the causative organism of which is leptospira icterohemorrhagiae. While a number of investigators have been working on this disease and several articles have appeared in the literature, yet relatively

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The Institute also conducts research and offers training to physicians who may wish to qualify as specialists in the study and treatment of this disease.

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MICHIGAN'S DEPARTMENT OF HEALTH

little is known so far of the incidence of the disease, the method of spread, and the prevalence of the organism.

Rats are known to carry the infection. The organism is eliminated in the urine of both rats and humans. Dogs have been found to be affected and to play a part, although just what part is as yet somewhat uncertain.

Recently an outbreak occurred in Detroit in which there was one fatality. This outbreak is being investigated and will be reported by epidemiologists of the Detroit Department of Health.

During March a request was made by the Michigan Department of Health to the U. S. Public Health Service for the aid of a consultant to study the disease in Michigan. Dr. A. Packchanian was sent to Michigan for this purpose. He has collected laboratory samples in several outbreaks and has given some attention to the epidemiology. The studies are not yet completed. If they prove at all promising, it is likely that they will be carried on for some time. The epidemiology of the disease does not appear to be simple and will probably require much work before any definite conclusions can be drawn. Dr. Packchanian has already established the etiology of a few of the cases in the Detroit outbreak as being the leptospira icterohemorrhagiæ.

One handicap in the investigations has been the difficulty in locating cases of what appear to be infectious jaundice during the acute stage when it is possible to obtain positive blood and urine cultures. Dr. Packchanian conservatively reserves judgment as to whether the outbreaks which have been occurring in Michigan are due entirely, or for the most part, to leptospira icterohemorrhagiæ. Physicians are requested to report promptly to the local health officer any cases that appear to be epidemic jaundice.

CHILDREN'S DENTISTRY

Detailed instruction of practicing dentists in the importance and technic of children's dentistry will be carried on at selected centers throughout the state as a part of the Michigan maternal and child health program. Plans for the postgraduate instruction in children's dentistry are now being worked out under the direction of Dr. William R. Davis, director of the Bureau of Mouth Hygiene. He is being assisted by Dr. U. G. Rickert, president of the State Dental Society; Dr. Paul H. Jeserich, director of the post-graduate work of the University of Michigan School of Dentistry; and representatives of the W. K. Kellogg Foundation and the Children's Fund of Michigan.

Outstanding authorities in the field of children's dentistry are being secured to conduct the courses in coöperation with the local dental societies. The post-graduate courses will get under way early in the fall.

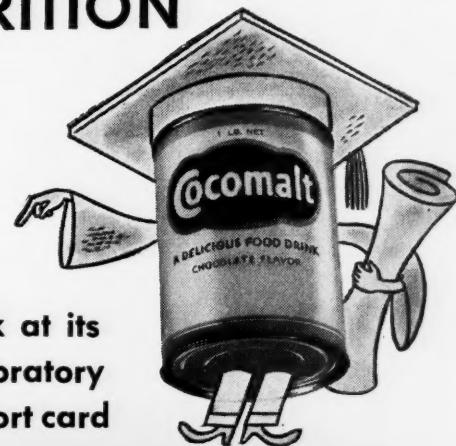
POSTGRADUATE COURSE IN PEDIATRICS

Physicians of northern Michigan will be offered a postgraduate course in pediatrics starting the week of May 2 as another phase of the Michigan maternal and child health program, it has been announced by Dr. Lillian R. Smith, director of the Bureau of Maternal and Child Health.

The course will be given at Grayling, Traverse City, Petoskey and Alpena on successive nights each week for four weeks. Dinner meetings will be held at each center to be followed by lectures and discussion. Physicians may attend the instruction center most conveniently located near them. There is no charge for the course.

The first series of lectures will be conducted by Dr. John L. Law, instructor in pediatrics and infectious diseases at the University of Michigan Hospi-

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tal. His subject will be "Management of meningitis, erysipelas, scarlet fever, and streptococcus infections in general with particular reference to the use and abuse of sulphanilamide."

Dr. W. C. C. Cole of Detroit Woman's Hospital will conduct the postgraduate lectures the week of May 9 on the subject of "Nontuberculous infections in the respiratory track as they occur in infancy and childhood."

The week of May 16 Dr. James Wilson of Detroit Children's Hospital will discuss "The newborn period: asphyxia (rôle of analgesic in production of), resuscitation, hemorrhage, atelectasis and other conditions of the newborn."

Dr. J. A. Johnston, pediatrician-in-chief at Detroit Henry Ford Hospital, will give the final series of lectures. His topic is "Nutritional studies in infancy and childhood; comparative study of various types of infant feeding; diet requirements in the older child and the adolescent; relation between infection and nutrition."

Seeking a Job

The editor of the *Malaya Tribune*, Selangor, F.M.S., received the following letter from a native who was applying for a position:

"Dear Sir, very honored and respected,

"I asking for job. I can do any kind of works by virtue of my flexible brain and very advanced training. I passed matriculation in a very large college in —.

"The flexible brain I have in my possession will bend towards any kind of works your honor yoking on me. I mathematics passing very good credit, making very good machine-like work; modern calculating machine simply eclipsed by my brain. English I passing with credit so I can be burdened with correspondence writing. . . .

"If your honor will be good enough to employ me, I will in duty bound always pray for your honor's long life. My prayers have always been heard as I always pray very loud. If wanting my services, I can come suddenly. Putting myself at your honor's large feet, I pray to become your honor's humble and faithful servant. I remain, Your Godsend servant."

—*Efficiency Magazine.*

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Age 25							
					This indicates 100 men representing an average group starting out in life.		
Age 35	5	10	10	40	35		
Age 45	16	1	3	65		15	
Age 55	20	1	3	46		30	
Age 65	36	1	4	5		54	
Age 75	63	1	2				34

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◆ General News and Announcements ◆

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2. Cass County Medical Society
3. Clinton County Medical Society
4. Delta County Medical Society
5. Dickinson-Iron County Medical Society
6. Eaton County Medical Society
7. Gogebic County Medical Society
8. Hillsdale County Medical Society
9. Houghton-Baraga-Keweenaw County Medical Society
10. Ingham County Medical Society
11. Jackson County Medical Society
12. Lapeer County Medical Society
13. Lenawee County Medical Society
14. Livingston County Medical Society
15. Luce County Medical Society
16. Manistee County Medical Society
17. Mecosta-Osceola County Medical Society
18. Menominee County Medical Society
19. Muskegon County Medical Society
20. Newaygo County Medical Society
21. O.M.C.O.R.O County Medical Society
22. Oceana County Medical Society
23. Ontonagon County Medical Society
24. Saginaw County Medical Society
25. Schoolcraft County Medical Society
26. Shiawassee County Medical Society
27. Tuscola County Medical Society.

These county medical societies have recorded 100 per cent paid membership for the year 1938. Is your county society listed above? Several societies have reported dues for all their members except one or two. If your dues are unpaid, please contact your county secretary today; you may be able to put your society in the 100 per cent classification.

"*You cannot make the burden of civilization too great.*"—A.M.L., Detroit.

* * *

The Lenawee County Medical Society heard Dr. Robert S. Breakey of Lansing on April 19. Doctor Breakey spoke on the subject of "Syphilis."

* * *

Dr. Ralph H. Pino of Detroit addressed the members of the Saginaw County Woman's Auxiliary on April 21 on the subject "Conservation of Eyesight."

* * *

"*Depression* is that period when we do without some of the things our parents never had."—J.M.R., Detroit.

* * *

Dr. Henry R. Carstens of Detroit, chairman of the Finance Committee of The Council, M.S.M.S., has been enjoying a vacation at Miami, Florida.

* * *

Modern definition of "technic": "Doing the simplest things with the greatest difficulty."—V.M.M., Grand Rapids.

* * *

Dr. Gordon Myers of Detroit spoke to the members of the Wexford County Medical Society at Cadillac on March 31. His subject was "Sulfanilamide."

* * *

Dr. Phillip Howard, Detroit, spoke on the subject "Convulsive Disorders of Infancy and Childhood" before the Lapeer County Medical Society on April 21, in Lapeer.

The Glee Club of the Wayne County Medical Society presented its Fifth Annual Concert in the Main Auditorium of the Detroit Institute of Arts on April 25.

* * *

Chiropractor pleads guilty.—J. J. Robbins, a chiropractor of Mason (Ingham County), Michigan, pled guilty on April 12 to a charge of practicing medicine without a license. Photostatic copies of a sign which read "Dr. J. J. Robbins" were produced in court.

* * *

Dr. Loren W. Shaffer, chairman of the Advisory Committee on Syphilis Control of the M.S.M.S., appeared on Wednesday, April 13, before the Oakland County Medical Society. His subject was "The Michigan Program of Syphilis Control."

* * *

You owe much of your medical security today to the past activities of organized medicine. You have an obligation to those who follow. Will you help carry on? Your destiny is intimately related to the success of your county, state and national medical organizations.

* * *

"*State Society Night*" will be celebrated by the St. Joseph and Branch County Medical Societies at Coldwater, on May 11. The O.M.C.O.R.O County Medical Society was host to the officers of the Michigan State Medical Society at a "State Society Night" program on April 27 in Gaylord.

* * *

Dr. Douglas Donald, Professor of Medicine, Wayne University, Detroit, addressed the St. Clair County Medical Society at its meeting of April 19 held at the Chateau in Port Huron. His subject was "Pain in the Cardiac Area Not Due to Coronary Disease."

* * *

The Gratiot-Isabella-Claire County Medical Society and the Dental Society held a joint meeting in Alma on April 21. Dr. Arthur C. Curtis of the Department of Internal Medicine, University of Michigan, was guest speaker. His subject was "Focal Infections."

* * *

Speed Trap: Physicians driving through Webberville, on U. S. 16 (between Detroit and Lansing), are warned to cut their speed to 20 miles per hour, as numerous complaints have been registered with the A.A.A. concerning the zealousness of Webberville's town marshal.

* * *

"Does your firm advertise in THE JOURNAL of the Michigan State Medical Society and does it exhibit at the annual conventions of the M.S.M.S.?" Ask this question of all detail men who call upon you seeking your patronage.

Patronize those who support you!

* * *

The State Compensation Officer of the Michigan Works Progress Administration at Lansing announces to the medical profession that treatment of hernia by the injection method is not authorized by the United States Employees' Compensation Commission, and will not be paid for by said commission.

GENERAL NEWS AND ANNOUNCEMENTS

Dr. Stanley Leszynski of Detroit and *Dr. Francis J. O'Donnell* of Alpena have been appointed by the Governor to serve as new members of the Michigan State Board of Registration in Medicine. Drs. Eugene S. Thornton of Muskegon, Harold L. Morris of Detroit and John J. Walch of Escanaba have been reappointed as Board members.

* * *

Governor Frank Murphy has appointed four members to the State Board of Examiners in Basic Sciences. The Basic Science examinations will be in those subjects basic to all the healing professions. The appointees are all teachers who are not engaged in the actual practice of any of the healing arts. They consist at the present of Dr. W. O. Nelson of Wayne University, Dr. J. P. Haitams of Calvin College, Grand Rapids, the Rev. Father George Shiple of the University of Detroit, and Dr. Ralph C. Huston of Michigan State College. Another member of the Basic Science Board will be selected, according to a newspaper item, from nominations from the chiropractors. Departments in which the examinations will be held are physiology, anatomy, bacteriology, hygiene and public health, and chemistry.

* * *

Dr. Milton Shaw, Lansing, immediate past-president of the Ingham County Medical Society, was presented with a silver tray upon which was engraved the signature of every member of the Society. The award was given in appreciation of the service Doctor Shaw has rendered the medical profession and the community in the past.

* * *

The Detroit Tigers will be at home in Detroit prior to, during, and immediately after the 1938 annual meeting of the Michigan State Medical Society next September:

September 15, 16, 17—playing New York
September 18, 19—playing Washington
September 20, 21—playing Philadelphia
September 22, 23, 24, 25—playing Cleveland

* * *

Requests are being received almost daily by the Michigan State Medical Society Placement Bureau

from young physicians who desire to find suitable locations. Already three physicians have been assisted by the Bureau to find good locations to practice. Anyone who needs an assistant or who knows of a community where another physician is needed, is invited to communicate with the Placement Bureau, M.S.M.S., 2020 Olds Tower, Lansing.

* * *

San Francisco invites you.—On June 13, the American Medical Association's Annual Convention will convene in the Coast City. Physicians who plan to attend this great scientific exposition should secure hotel reservations at once. Write or wire Dr. F. C. Warnshuis, 450 Sutter Street, San Francisco. Give the names of members of your party, type of accommodations required, rates, dates of arrival and departure.

* * *

Members of the Michigan State Medical Society are cordially invited to join the Chicago Medical Society Special to the American Medical Association Convention in San Francisco. The special leaves Chicago on June 9, 1938, at 9:00 p. m. and arrives in San Francisco at 8:30 a. m., Sunday, June 12. For further information, address Dr. Victor L. Hitzfeld, chairman, Train Arrangements, Chicago Medical Society, 30 North Michigan Ave., Chicago, Ill.

* * *

Some untested drugs, like elixir of sulfanilamide, have proven deadly to patients and ruinous to a physician's reputation.

No unproven drugs are advertised in THE JOURNAL of the Michigan State Medical Society. Only pharmaceutical products accepted by the Councils of the American Medical Association are to be found in the pages of your State Society publication. This is for the protection of your patients and you. Patronize JOURNAL advertisers. Be safe.

* * *

The Upper Peninsula Medical Society will meet in Sault Ste. Marie on August 17 and 18, 1938. The Program Committee, of which Dr. F. C. Bandy of Sault Ste. Marie is chairman, is arranging a quality program for the two-day convention, which will

The Forty-ninth Annual Reunion

and

Detroit Clinics

of the Alumni Association of Wayne University
College of Medicine

will be held at Detroit, June 15 and 16, 1938

GENERAL NEWS AND ANNOUNCEMENTS

include a talk by Dr. W. W. Bauer of the American Medical Association, and also a symposium on "The Socio-Economic Problems of Medicine."

The complete program of the Upper Peninsula meeting will be published in succeeding issues of THE JOURNAL.

* * *

State Health Commissioner Don W. Gudakunst and Dr. C. C. Young, Director of the Laboratory, extend an invitation to all County Societies of the State to visit the Laboratory, located just outside of Lansing. Any Society wishing to accept this invitation may write Doctor Gudakunst and make all necessary arrangements. A visit to the Laboratory is very worthwhile; the amount and type of work done by the State Health Laboratory is not realized until one visits the plant.

* * *

The Wayne County Medical Society has publicized in the daily newspapers in Detroit the fact that medical care is available for every resident of Wayne County regardless of his economic circumstances. Each member of the medical profession has been supplied with an elaborate diagram supplying correlated information showing how each person may receive medical care that he or she needs. If the patient is unable to pay anything, it is supplied. If he can meet the cost in deferred payments, he is shown how this may be done.

* * *

Mr. George T. Gundry, Auditor General of Michigan, has written the following relative to the Michigan State Medical Society's Filter System, created to help control intake under the Afflicted-Crippled Child Acts:

"The Medical Filter Committee is doing a difficult job with splendid results on a strictly gratuitous basis. Therefore, this office is desirous at all times of co-

operating in every way with the Medical Filter Committee in its various duties, and we will never advocate any procedure which circumvents the work of that committee."

* * *

Crippled and Afflicted Child Commitments for the month of March, 1938, were as follows: Crippled Child: Total of 354 of which 155 went to University Hospital; and 199 went to miscellaneous hospitals. Of the above, Wayne County wrote 110 orders of which 31 went to University Hospital and 79 went to miscellaneous hospitals.

Afflicted Child: Total of 2,200 of which 295 went to University Hospital; and 1,905 went to miscellaneous hospitals. Of the above, Wayne County wrote 632 of the orders, of which 37 went to University Hospital and 595 went to miscellaneous hospitals.

* * *

Two "refresher courses" have been arranged by the Michigan Crippled Children Commission for physicians in the neighborhood of Bay City and Ironwood.

Dr. John Law of Ann Arbor and Dr. A. D. LaFerte of Detroit conducted the course in Bay City on May 11. Dr. Law's subject was "Pediatric Problems," and Dr. LaFerte spoke on "Fractures of the Neck of the Femur."

On May 23, a "refresher" will be given in Wakefield, Gogebic County, for all physicians of the upper Peninsula. Dr. E. R. Elzinga of Marquette will speak on "Fractures of the Hip," and Dr. M. Cooperstock will present "Treatment in Pediatrics."

* * *

Dr. Harold A. Miller of Lansing spoke before the Community Lecture Committee, Eaton Rapids High School, on the subject of "Adolescence" on March 10. On March 21, he addressed the Parent-Teacher

Ferguson-Droste-Ferguson Sanitarium

Ward S. Ferguson, M. D.

James C. Droste, M. D.

Lynn A. Ferguson, M. D.

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DISEASES OF THE RECTUM

GRAND RAPIDS, MICHIGAN

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GENERAL NEWS AND ANNOUNCEMENTS

Association of Lapeer on the subject of "Problems of Sex Education in High Schools."

"Social Disease with Its Implications" was the subject of his lecture on the Parent Institution Program held in Reading on March 30. The Thumb Association of Child Study Club, Sandusky, scheduled Doctor Miller on May 18 to speak on "Sex Education in High Schools." Doctor Miller's lectures are given under the auspices and sponsored by the Joint Committee on Health Education.

* * *

Dr. C. D. Munro of Jackson was honored recently by members of the Jackson County Medical Society when the Society presented to the Board of Managers of Foote Memorial Hospital, Jackson, a bronze plaque on which is embossed the profile and a testimonial to Dr. Munro. Dr. John D. Van Schoick, President of the Jackson County Medical Society, presented the plaque to Chairman H. D. Burton of the Hospital Board. Dr. Munro is a past president of the Jackson County Medical Society and former chairman of the surgery section of the Michigan State Medical Society. Dr. Munro has a son, Nathan, who is a sophomore in the medical school at the University of Michigan.

* * *

Your friends—The following firms are some more of your friends who entered technical exhibits at the 1937 Grand Rapids Convention. Products of these firms are Council approved and are worthy of your consideration:

Randolph Surgical Supply Company, Detroit, Mich.
E. J. Rose Manufacturing Company, Detroit, Mich.
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Van Hoosen Farm, Rochester, Mich.
Wall Chemicals, Inc., Detroit, Mich.
Western Electric Hearing Aids, Detroit, Mich.
The Zemmer Company, Pittsburgh, Pa.
The Zimmer Manufacturing Company, Warsaw, Indiana.

* * *

The Wayne County Medical Society received many lines of favorable publicity in Detroit newspapers as a result of its statement to the public "If you need medical care, see your physician. He will see that you get it."

One newspaper carried the following announcement, prominently displayed:

**IF YOU NEED MEDICAL CARE
AND DO NOT KNOW HOW TO GET IT
WRITE AT ONCE TO
WAYNE COUNTY MEDICAL SOCIETY
4421 WOODWARD AVENUE
DETROIT**

This activity represented the first step in the Wayne County Medical Society's study of medical needs, in conformity with the A.M.A. Survey.

* * *

The Third Anniversary Meeting of District Department of Health No. 6 (Luce and Mackinac Counties) was held on April 1 in Newberry. Over 300 attended the afternoon public meeting. More than 100 teachers and nurses attended the round table discussion in the morning. All the members of the staffs of the nine health units in the Upper Peninsula were present. Among the speakers were Dr. Don W. Gudakunst, State Health Commissioner, Dr. Loren W. Shaffer, Detroit, chairman of the M.S.M.S Advisory Committee on Syphilis Control, and Dr. Clare Gates, field secretary of the Joint Committee on Health Education. Dr. F. C. Bandy of Sault Ste. Marie, Councilor of the State Medical Society, acted as chairman of the afternoon program.

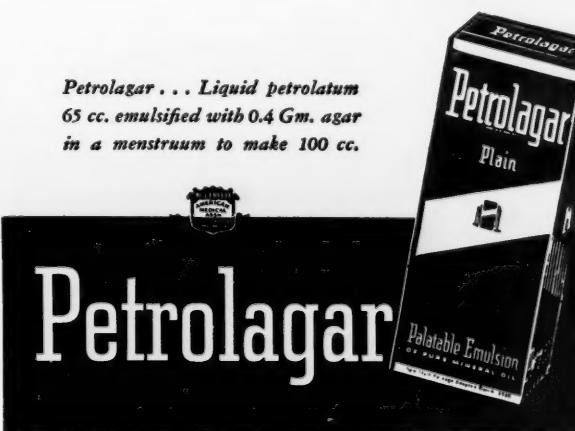
MAY, 1938.



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in a menstruum to make 100 cc.*



GENERAL NEWS AND ANNOUNCEMENTS

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Official Call to the Officers, Fellows, and Members of the American Medical Association: The eighty-ninth annual session of the American Medical Association will be held in San Francisco, California, from Monday, June 13, to Friday, June 17, 1938.

The House of Delegates will convene on Monday, June 13.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June 14, at 8:30 p. m.

The various sections of the Scientific Assembly will meet Wednesday, June 15, at 9 a. m. and at 2 p. m. and subsequently according to their respective programs.

**J. H. J. UPHAM, M.D., President
NATHAN B. VAN ETEN, M.D.
Speaker, House of Delegates
OLIN WEST, M.D., Secretary.**

* * *

The Medical Society of the State of New York has developed a "Hand Book Series," as a part of its Speaker's Bureau activity. The series includes monthly bulletins covering particular subjects for dissemination to the public by physicians who have indicated their willingness to address lay audiences in behalf of health education.

Dr. Charles H. Goodrich, president of the Society, states: "It is required of us in all loyalty to our people and to each other to increase our platform appearances and to provide for systematic covering of the many truths which the people should know and concerning which they are being deceived by gilded sophistries and false promises."

* * *

Healers refused the title of "Doctor" in Ontario.—A bill which sought the title of "doctor" for osteopaths, chiropractors and recognized drugless practitioners was thrown out by the Private Bills Committee of the Ontario Legislature, on March 29. According to the *Toronto Daily Star*, "provincial police had to be called to make a path for Dr. Herbert Bruce through the hallway outside the committee room, which was jammed by supporters of the drugless practitioners. They jostled the former lieutenant-governor and called insulting remarks at him."

"It was immediately after Dr. Bruce's plea against the bill that the committee overwhelmingly disposed of it."

* * *

THE JOURNAL of the Michigan State Medical Society has played no small part in the progress of Michigan medicine to its present estimable position. Today **THE JOURNAL** with its excellent presentation of original research, special articles, committee reports and county society activities ranks with the outstanding state society publications. As a promoter of society unity, **THE JOURNAL** serves to weld together Michigan medicine in an integrated program for conserving the health of the citizens of this state. Dr. J. H. Dempster and the publication committee of the society are to be congratulated on the fine service they are rendering their profession and, consequently, all the people of Michigan.—*Michigan Public Health*, February, 1938.

* * *

The employed person in the United States wants a job and the health to keep on the job. He does not want to lose any time due to sickness. He knows that in Germany, under a health insurance system, time lost through sickness by insured workmen trebled in fifty years. In England the time lost increased from nine days, before compulsory insurance went into effect, to twelve and one-half days per man yearly after the system was in operation.

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GENERAL NEWS AND ANNOUNCEMENTS

The comparison with American figures is striking, for the average loss of time by our own workmen is only about six and one-half days a year, and the figures have been stationary at that level for twenty-five years, and under a system of private medical practice!

* * *

The Medical School Seminar at the 41st Annual Meeting of the Associated Harvard Clubs, will be held at the Palmer House, Chicago, Saturday, May 21, at 2:30 p. m. immediately following a joint luncheon of all the schools. Those on the program of the Medical Seminar include Dr. C. Sidney Burwell, Dean and Research Professor of Clinical Medicine, Harvard; Dr. A. Baird Hastings, Hamilton Kuhn Professor of Biological Chemistry; Dr. Walter Bauer, Associate Professor and Tutor in Medicine; and Dr. Elliott C. Cutler, Moseley Professor of Surgery.

All graduates of the University are invited to attend. Admission cards are available to non-Harvard men; address Dr. Willard O. Thompson, 700 North Michigan Avenue, Chicago, Ill.

* * *

The Michigan Department of Health, the University of Michigan Department of Postgraduate Medicine, the Michigan State Medical Society and the Michigan Branch of the American Academy of Pediatrics are sponsors of the second series of post-graduate lectures in pediatrics in four centers, Alpena, Petoskey, Traverse City, and Grayling, once a week for four weeks, now in session.

The weekly schedule of lectures is as follows: Monday, Grayling, Mercy Hospital, 6:00 p. m.; Tuesday, Alpena, Owl Cafe, 6:00 p. m.; Wednesday, Petoskey, Hotel Perry, 6:00 p. m.; Thursday, Traverse City, Central Michigan Children's Clinic, 4:00 p. m.

The program: *Week of May 2*—Dr. John Law, Ann Arbor. Management of meningitis, erysipelas, scarlet fever, and streptococcus infections in general with particular reference to the use and abuse of sulfanilamide. *Week of May 9*—Dr. W. C. C. Cole, Detroit. Non-tuberculous infections in the respiratory tract as they occur in infancy and childhood. *Week of May 16*—Dr. James Wilson, Detroit. The newborn period; asphyxia (rôle of analgesic in production of), resuscitation, hemorrhage, atelectasis and other conditions of the newborn. *Week of May 23*—Dr. J. A. Johnston, Detroit. Nutritional studies in infancy and childhood; comparative study of various types of infant feeding, diet requirements in the older child and the adolescent; relation between infection and nutrition.

* * *

American Express Tour to A.M.A.

Physicians and their families are evincing a very keen interest in arrangements made by the American Express Travel Service to see America en route to and returning from the San Francisco Convention of the A.M.A.

The beauty and relaxation of such scenes as the Indian Detour in New Mexico, the Grand Canyon of Arizona, Los Angeles and the beauties of southern California, Santa Catalina Island, the famous Columbia River Highway in Oregon, Seattle, Washington, Victoria, Vancouver, Lake Louise and Banff in the Canadian Rockies, Yellowstone National Park, Colorado Springs and many others, will be enjoyed.

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MAY, 1938



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* * *

Organizational talks by officers and by the Executive Secretary of the Michigan State Medical Society during the past month include:

Speaker	City	Date	Organization	Subject
Dr. P. R. Urmston	Battle Creek	3/22	Calhoun County Med. Soc.	"A.M.A. Survey"
Dr. L. F. Foster	Battle Creek	3/22	Calhoun County Med. Soc.	"A.M.A. Survey"
Dr. L. G. Christian	Battle Creek	3/22	Calhoun County Med. Soc.	Michigan Health League
Wm. J. Burns	Battle Creek	3/22	Calhoun County Med. Soc.	"What the M.S.M.S. is Doing"
Dr. L. F. Foster	Port Huron	4/5	St. Clair County Med. Soc.	"A.M.A. Survey"
Dr. P. R. Urmston	Port Huron	4/5	St. Clair County Med. Soc.	"The Council's Work"
Wm. J. Burns	Port Huron	4/5	St. Clair County Med. Soc.	"Recent Legislative Developments"
Dr. L. F. Foster	Lansing	4/19	Ingham County Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Lansing	4/19	Ingham County Med. Soc.	"What's Going On"
Dr. L. F. Foster	Uly	4/21	Huron-Sanilac Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Battle Creek	4/26	Battle Creek Academy of Medicine and Dentistry with Calhoun County Bar Ass'n	"Results from Coöperation"
Dr. Henry Cook	Gaylord	4/27	OMCORA County Med. Soc.	"Preventive Medicine"
Dr. P. R. Urmston	Gaylord	4/27	OMCORA County Med. Soc.	"Work of the Council"
Dr. L. F. Foster	Gaylord	4/27	OMCORA County Med. Soc.	"A.M.A. Survey"
Wm. J. Burns	Gaylord	4/27	OMCORA County Med. Soc.	"Other Activities"
Dr. Henry Cook	Kalamazoo (noon)	5/11	Kalamazoo Academy of Medicine (Board of Trustees)	"A.M.A. Survey"
Dr. L. F. Foster	Kalamazoo (noon)	5/11	Kalamazoo Academy of Medicine (Board of Trustees)	"A.M.A. Survey"
Dr. P. R. Urmston	Coldwater (night)	5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Dr. F. T. Andrews	Coldwater (night)	5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Wm. J. Burns	Coldwater (night)	5/11	St. Joseph-Branch County Med. Societies	"State Society Night"
Wm. J. Burns	Battle Creek	5/12	Mich. State Nurses Ass'n	"Panel Discussion"
Dr. L. F. Foster	Marquette	5/14-15	{Upper Peninsula County	"A.M.A. Survey"
Wm. J. Burns	Marquette	5/14-15	Society Secretaries' Conference	"Other Activities"
Dr. L. F. Foster	Monroe	5/19	Monroe County Med. Society	"Ethics"
Wm. J. Burns	Monroe	5/19	Monroe County Med. Society	"A.M.A. Survey"

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The Chicago Tumor Institute, chartered in Illinois, not for profit, conducts research on the causes, diagnosis, and treatment of cancer, instructs and assists physicians, surgeons, clinics, and hospitals in the diagnosis and treatment of cancer, and trains cancer specialists.

The two unique features of the Institute are, (1) the assembling of a group of leading cancer authorities from various medical centers of the world to collaborate in the study of the cancer problem, and (2) the formation of an organization devoted exclusively to the study of cancer.

The Institute is equipped with research laboratories and modern x-ray and radium equipment. The former includes two x-ray machines of medium voltage and two of the super-voltage type. The Institute will have at its disposal eleven grams of radium, ten of which will be used in the form of a radium bomb.

* * *

Dr. A. W. Lescohier, who has been for a number of years manager of Parke Davis and Company, has been promoted to the position of president. THE JOURNAL extends congratulations to Dr. Lescohier in this recognition of his ability. A member of the medical profession, the doctor has kept close to the profession. He is an old member of the Wayne County Medical Society and Michigan State Medical Society. Dr. Lescohier was associated with the Research Department of Parke Davis before he was an M.D. He relinquished his position from 1905 to 1909 to attend what is now the Medical School of Wayne University. His course in medical college was brilliant. Following his graduation, in 1909, he returned to Parke Davis where he has remained. His career has been so satisfactory to

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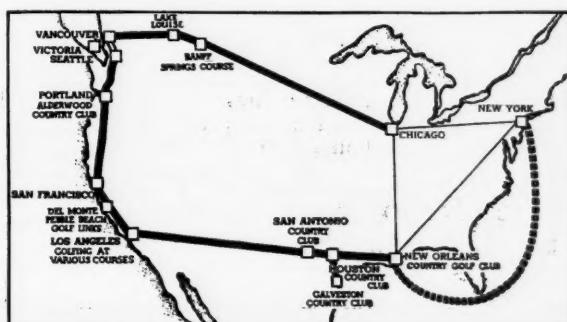
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* * *

All around or part way.—Flexibility marks the "Golfer's Special" itinerary to San Francisco for the 24th Annual Tournament of the American Medical Golfing Association, June 13, 1938. You may join the Tour at three points: (1) at New York, sailing on the luxurious S. S. Dixie to New Orleans, (2) at New Orleans, via rail to Houston, Galveston, San Antonio, Los Angeles, Del Monte, and San Francisco, (3) at San Francisco, for the return journey via rail through the glorious Northwest—Portland, Seattle, (all-day boat trip up Puget Sound), Victoria, Lake Louise and Banff. Non-golfers as well as golfers (and their ladies) are invited to take advantage of this wonderful trip. Write for complete details: Bill Burns, 731 N. Capital Ave., Lansing.



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Active material of such uniformity and stability may be divided into exact units and a standardized treatment for every suspected rabies infection may be completed with only fourteen doses. Of all persons given preventive inoculations with such Rabies Vaccine, only 0.02 per cent have developed the disease.

* * *

Taxes payable by individual physicians.—Under the Social Security Act an employer is liable for certain taxes. There are only a few exceptions to the rule. A physician is in the same position as any one else. If he employs one or more persons not in the excepted class, he must apply for a registration number to the Social Security unit or the tax unit of the Commissioner of Internal Revenue office and get a number for himself as an employer. His employee must do likewise. The physician must make his regular monthly, quarterly and annual returns, paying his own taxes and the tax that he deducts from his employee's salary.

If a physician is an employee, he likewise is liable for taxes under the Social Security Act, and he must like wise apply for and be given a number. A physician who employs only one employee not in the excepted class—a domestic servant for instance, is excepted—is liable for the tax. If he employs a nurse, he is liable. If he employs a secretary, he is liable. If he employs as many as eight persons, or if a hospital or other organization not exempt employs as many as eight persons, that physician or organization is liable for additional taxes. The simplest way is to determine one's status as an employer or as an employee and set one's course right so that one will not be called on later to pay taxes and accrued penalties.—Wm. C. Woodward, M.D., L.L.M., Chicago.

* * *

Death in Florida.—In 1935, Dr. Hendry Connell of Kingston, Ont., announced the discovery of "Ensol" for use in treating cancer. The press hailed it as a new "cancer cure," but the American Medical Association condemned the fluid as unscientifically compounded. Dr. Morris Fishbein, A.M.A. spokesman, editorialized: "Public officials, university officials, and some Canadian physicians have been led into participation in the promotion of a project which will inevitably bring them grief."

At Orlando, Fla., last week grief came not to officials but to ten cancer patients—two men, eight women—who died from a lockjaw-like disease. Four others lay seriously ill in local hospitals. All had been given injections of "Rex" (name of a drug made under the Ensol formula by the Biochemical Research Foundation, Philadelphia).

Last fall, when Elixir of Sulfanilamide killed ninety-three persons throughout the country, government agents had to trace more than 1,000 shipments to warn doctors of danger (*News Week*, Nov. 1, 1937). In tracking down Ensol shipments, the Federal Food and Drug Administration found that only six physicians in New York, Ohio, Kansas, Michigan, and Wisconsin possessed the drug—and they had just fifty-four vials of Ensol among them. It took but a few hours to telephone them to hold their supplies for future examination.

In Kingston, Dr. Connell defended himself: "I

JOUR. M.S.M.S.

GENERAL NEWS AND ANNOUNCEMENTS

am convinced one bottle of Ensol became contaminated." But health officials took two vials at random from the supply of Dr. T. A. Neal—who had administered the drug to Orlando victims—and injected the contents into guinea pigs. Since some of the animals died of lockjaw, it is believed Dr. Neal's entire stock was contaminated.—*News Week*, April 11, 1938.

* * *

School Health Educational Institute

The Division of Hygiene and Public Health and the Extension Service of the University of Michigan in coöperation with the Michigan School Health Association announce a School Health Education Institute, May 27 and 28, 1938, at the Michigan Union, University of Michigan, Ann Arbor.

PROGRAM

Friday, May 27

Morning

Bernard W. Carey, M.D., President of the Michigan School Health Association, presiding

REGISTRATION.

INTRODUCTORY REMARKS. *Bernard W. Carey, M.D.*

TRENDS IN SCHOOL HEALTH EDUCATION. *John Sundwall, M.D., President of the American School Health Association, and Director of the Division of Hygiene and Public Health, University of Michigan.*

INTERMISSION. (Discussion.)

SOME DEBATABL ISSUES IN HEALTH EDUCATION. *J. B. Edmonson, Ph.D., Dean, School of Education, University of Michigan.*

INTERMISSION. (Discussion.)

SEEKERS OF HEALTH. *Thurman B. Rice, M.D., Chief, Bureau of Health and Physical Education, Indiana Division of Public Health.*

LUNCHEON, 60c.

BUSINESS MEETING, Michigan School Health Association.

Afternoon

J. D. Brook, M.D., Member of Board of Directors, Michigan School Health Association, presiding.

THE MEDICAL PROFESSION AND THE PUBLIC SCHOOLS. *Henry Cook, M.D., President, Michigan State Medical Society.*

INTERMISSION. (Discussion.)

THE STATE DEPARTMENT OF PUBLIC INSTRUCTION AND HEALTH EDUCATION. *Hon. Eugene B. Elliot, Superintendent of Public Instruction.*

INTERMISSION. (Discussion.)

THE STATE DEPARTMENT OF HEALTH AND HEALTH EDUCATION. *Don W. Gudakunst, M.D., State Health Commissioner.*

INTERMISSION. (Discussion.)

COLLEGE HEALTH PROGRAMS IN MICHIGAN. THEIR PRESENT STATUS. *Glenadine Snow, M.D., Director, Student Health Service, Ypsilanti State Normal College.*

INTERMISSION. (Discussion.)

DINNER, 75c (Michigan Union).

Kenneth L. Heaton, Ph.D., Director, Bureau of Curriculum Research, Lansing, Toastmaster.

THE MICHIGAN SCHOOL HEALTH ASSOCIATION. WHAT IT STANDS FOR. *Bernard W. Carey, M.D., President, Michigan School Health Association.*

THE AMERICAN SCHOOL HEALTH ASSOCIATION. *John Sundwall, M.D., President, American School Health Association.*

THE UNIVERSITY AND SCHOOL HEALTH EDUCATION. *James D. Bruce, M.D., Director, Division of Health Sciences, University of Michigan.*

MEETING OF CITY AND COUNTY HEALTH OFFICERS. *Sue H. Thompson, M.D., Director, Health District No. 2, West Branch, Michigan, Presiding.*

ADDRESS: *Don W. Gudakunst, M.D., State Health Commissioner.*

Saturday, May 28

Morning

V. K. Volk, M.D., Secretary, The Michigan School Health Association, presiding.

THE PHYSIOLOGICAL BASIS OF HEALTH. *John W. Bean, M.D., Assistant Professor of Physiology, University of Michigan.*

INTERMISSION. (Discussion.)

HEALTH MISCONCEPTIONS. *Warren E. Forsythe, M.D., Director, University Health Service, University of Michigan.*

INTERMISSION. (Discussion.)

COORDINATION OF HEALTH AND PHYSICAL EDUCATION. *Thurman B. Rice, M.D., Chief, Bureau of Health and Physical Education, Indiana Division of Public Health.*

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MAY, 1938

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Afternoon

Louise Knapp, R.N., Professor of Public Health Nursing, Wayne University, Detroit, presiding.

THE NURSE'S CONTRIBUTION TO SCHOOL HEALTH EDUCATION. Grace Ross, R.N., Supervisor of Nursing, Detroit Department of Health.

INTERMISSION. (Discussion.)

THE PROBLEM SOLVING APPROACH TO SCHOOL HEALTH PROBLEMS. Mabel E. Rugen, Ph.D., Associate-Professor of Physical Education, University of Michigan.

INTERMISSION. (Discussion.)

A SIX-POINT PROGRAM FOR THE IMPROVEMENT OF DENTAL HEALTH. (Illustration.) Kenneth A. Easlick, D.D.S., Assistant-Professor, School of Dentistry, University of Michigan.

INTERMISSION. (Discussion.)

CHILD GUIDANCE IN THE PUBLIC SCHOOLS. Paul H. Jordan, M.D., Psychiatrist, Michigan Child Guidance Institute, Ann Arbor.

DISCUSSION.

* * *

**EXHIBITORS AT 1938 MICHIGAN
STATE MEDICAL SOCIETY CONVENTION**

Book-Cadillac Hotel, Detroit, September 20, 21, 22, 1938:

Name of Company	City	Booth No.
Akron Truss Company.....	Detroit, Mich.	75
A. S. Aloe Company.....	St. Louis, Mo.	4
Arlington Chemical Company.....	Yonkers, N. Y.	15
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Bilhuber-Knoll Corporation.....	Jersey City, N. J.	38
Burroughs Wellcome & Co., Inc.	New York, N. Y.	12
S. H. Camp Company.....	Jackson, Mich.	22
Coca-Cola Company.....	Atlanta, Ga.	70
Cottrell-Clarke, Inc.	Detroit, Mich.	64
R. B. Davis Sales Corp.	Hoboken, N. J.	66
Detroit X-ray Sales Co.	Detroit, Mich.	59
Dictaphone Sales Corp.	Detroit, Mich.	71
Duke Laboratories, Inc.	Long Island City, N. Y.	52
General Electric X-ray Corp.	Chicago, Ill.	53
Gerber Products Company.....	Fremont, Mich.	45
Gordon Shoe Co.	Detroit, Mich.	72
Hack Shoe Company.....	Detroit, Mich.	3
Hanovia Chemical & Mfg. Co.	Newark, N. J.	5, 6
J. F. Hartz Company.....	Detroit, Mich.	54
H. J. Heinz Company.....	Pittsburgh, Pa.	43
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Horlick's Malted Milk Corp.	Racine, Wis.	28
G. A. Ingram & Company.....	Detroit, Mich.	62, 63
Jones Metabolism Equipment Co.	Chicago, Ill.	8
The Jones Surgical Supply Co.	Cleveland, Ohio	56
A. Kuhlman & Company.....	Detroit, Mich.	69
Lea & Febiger Company.....	Philadelphia, Pa.	55
Lederle Laboratories.....	New York, N. Y.	25
Libby, McNeill & Libby.....	Chicago, Ill.	68
Liebel-Flarsheim Company.....	Cincinnati, Ohio	50
J. B. Lippincott Company.....	Philadelphia, Pa.	9
M. & R. Dietetic Labs.	Columbus, Ohio	47
Mead Johnson & Company.....	Evansville, Ind.	29, 30
Medical Arts Pharmacy.....	Grand Rapids, Mich.	26, 27
Medical Case History Bureau.....	New York, N. Y.	40
Medical Protective Company.....	Wheaton, Ill.	39
The Mennen Company.....	Newark, N. J.	48
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* * *

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* * *

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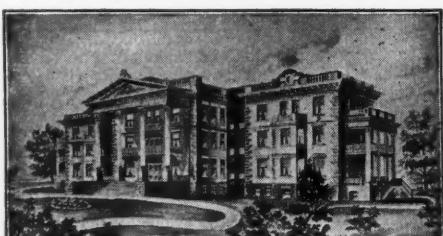
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Acknowledgment of all books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review, as expedient.

A TEXT-BOOK OF PATHOLOGY, Edited by E. T. Bell, M.D., Professor of Pathology, University of Minnesota, Minneapolis, Minnesota. Contributors: E. T. Bell, M.D., Professor of Pathology, B. J. Clawson, Professor of Pathology, Hal Downey, Ph.D., Professor of Hematology, J. S. McCartney, M.D., Associate Professor of Pathology, and C. J. Watson, M.D., Associate Professor of Medicine, University of Minnesota, Minneapolis, Minn. Third edition, enlarged and thoroughly revised, published 1938. Octavo, 894 pages, illustrated with 412 engravings and 2 colored plates. Cloth, \$9.50, net. Washington Square, Philadelphia: Lea & Febiger.

The third revision of this work has made it possible to bring it abreast with current medical thought on the subject. The book has been increased in size by over one hundred pages and sixty-two new illustrations have been added. The plan of the work is such that the student is able to approach clinical medicine as a direct continuation of his work in pathology. In other words, clinical medicine will not be found a new and different field. The arrangement of the work is such that it resembles a text on the practice of medicine, except that the emphasis is on pathology rather than etiology and symptomatology. It will make a splendid companion book to any work on practice.

THE PRINCIPLES OF ROENTGENOLOGICAL INTERPRETATION. By L. R. Sante, M.D., Professor of Radiology, St. Louis University School of Medicine, Radiologist to St. Louis City Hospital and St. Mary's Hospital, St. Louis. 340 pages, illustrated. Price \$5.50. Ann Arbor: Edwards Brothers, Inc., 1938.

This is a very teachable work. Instead of reproductions of roentgenograms, which are sometimes confusing to students and beginners, the illustrations are largely line drawings from x-ray films. This has enabled the author to emphasize the pathology under discussion and to bring it into relief. Though a splendid way of enlightening the student or the physician striving to obtain an intelligent conception of the subject, the radiograph should also be studied. It cannot be dispensed with. The whole range of roentgenography is presented. One hundred and eleven pages are devoted to fractures and bone disease. The various systems of the body are adequately discussed from the roentgenographic viewpoint. A commendable feature is the list of questions appended to each chapter for self-examination. The author is recognized by roentgenologists everywhere as one of the most competent to write such a textbook. A unique feature is the format in which the work appears. The pages are large, 8 by 11 inches in size, with double columns printed in typewritten style and photolithographed. Unusual as this method of bookmaking is, the effect on the whole is pleasing as it makes for easy reading.

BOOK OF TYPEFACES AND EDITORIAL HELPS. Limited edition. Copies on request. The Bruce Publishing Company, St. Paul, Minnesota.

This work discusses the subject of type in all its phases. It should interest all readers as well as editors. The selection of type is an art in itself. The printed page increases in interest the more we know about its mechanics. The point system is described at length, as well as the great variety of letters, by illustration. The question, what is a half-tone, is clearly explained. For the authors of papers, all the commonly used proofreader's correction marks are given.

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